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ABSTRACT

Compiled for use with gifted children is a collection of activities and lesson plans in the areas of the media, inquiry teaching, lessons using F. Williams' model, encounter lessons, and simulation learning activities all developed by teachers of the gifted at a summer institute. The collection is introduced by a section on basic theories which lists characteristics of the gifted and compares various taxonomies of educational objectives. Suggestions for media projects include critical film viewing and making video tape recordings. Outlined are the theory and process of using inquiry teaching with gifted students. The Williams Model which relates pupil behaviors (cognitive and affective) with curriculum areas and instructional strategies is examined, and offered are 15 activities such as a study of creative individuals. Twenty-four activities are suggested for encounter lessons which are explained to encourage direct interaction between small groups of students and specific stimuli. An example of the 12 simulation activities recommended is developing a newspaper policy through simulating various interest groups. Four lesson plans for complete units stress broad cognitive and affective aims and focus on the newspaper, algebra, short stories, and discovery and exploration. Appended are the illustrated multiple talent totem poles of C. Taylor, and an annotated bibliography of books recommended by institute participants. (DB)

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EDUCATING FOR THE FUTURE:

21ST CENTURY TEACHING

GOVERNOR'S SCHOOL TEACHER TRAINING INSTITUTE

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EDUCATING FOR THE FUTURE: 21ST CENTURY TEACHING

Compiled and Edited by

Elizabeth Broome

and

Governor's School Teacher Training Institute

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1973

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The cover was designed by Elizabeth Groff with suggestions and inspiration from the Institute participants, especially Paul White.

FOREWARD

Educators in North Carolina are constantly aware of the need to build on the good in the past, adapt to the present, and prepare for the future. One of the major keys to educational improvement and advancement is teacher training, for programs in the classes for our youngsters will be only as good as the teacher. In the attempt to "keep up" with the 20th Century and prepare for the 21st Century, the State Department of Public Instruction in cooperation with other institutions offers opportunities to teachers for training in innovative techniques and content. Because the gifted and talented students will become our leaders, it is important that the teachers of these people be prepared to encourage their thinking and aid them in developing their talents. This publication provides some teacher-prepared materials and ideas for stimulating other teachers to do their best in working with our gifted and talented students.

A. Craig Phillips
State Superintendent of Public Instruction

PREFACE

The Division for Exceptional Children has a wide range of interests and concerns and constantly seeks to help teachers who are working with all areas of exceptionality. The participants of the Governor's School Teacher Training Institute, in its Fourth Annual Session this summer, developed materials based on the study of theories and their application. This session had twenty teachers of the gifted and talented studying and working with experts in the field and with Governor's School students.

This publication is designed for the classroom teacher for use as a guideline and a starting point. We hope that many teachers will be encouraged to try their own ideas as they read this material. The teachers who developed these ideas and activities may serve as resource people to assist other teachers.

You are encouraged to request assistance from the Section staff as you evaluate your present program, plan for the future, or initiate new or different programs for your talented students.

Theodore R. Drain

Theodore R. Drain, Director
Division for Exceptional Children

Jerome Melton

Jerome H. Melton
Assistant State Superintendent
Program Services

INTRODUCTION

The Governor's School Teacher Training Institute began four years ago for the purpose of sharing with North Carolina public school teachers innovative and creative teaching techniques and research in education for gifted students and the theory of the Governor's School. Funds from the Smith Reynolds Foundation have been used for three years, and the State Department of Public Instruction funded one year. The program has received the enthusiastic support of Dr. Craig Phillips, Superintendent of Public Instruction.

From applicants nominated by superintendents, approximately twenty teachers are selected each year to attend the Institute. During the four years, the annual six-week session has been used to bring in consultants who are expert in their field and to produce practical applications of the theories that have been studied. The Institute participants share their knowledge and ideas by assisting in workshops that are conducted by the staff of the Gifted and Talented Section, Division for Exceptional Children of the State Department of Public Instruction.

While the Institute teachers read, study, and learn from consultants, they also participate in the Governor's School classes and activities. They often have an opportunity to test some of their own ideas which emerge during the session. Emphasis is constantly placed on the practical application to each person's own class situation. As a result of enthusiastic 1973 Teacher Training Institute participants, this publication, composed of their developed ideas, has been compiled to share with administrators and teachers across the State. We hope you will use, adapt, and elaborate to fit you.

I want to express appreciation to Mr. Theodore R. Drain, Director, Division for Exceptional Children, for his constant guidance and support for gifted education and this project specifically. Also, I want to express appreciation to Miss Cornelia Tongue, Coordinator of the Gifted and Talented Section, for her support and helpful suggestions. Proofreading and typing were done by Miss Patricia Gatewood, Mrs. Jane Allen, and Mrs. Jane Ferrell. Mrs. Jane Allen is responsible for the excellent reproduction of illustrations throughout the publication. I am grateful to all of these young ladies for their hard work which they have done so willingly.

Elizabeth Broome

GOVERNOR'S SCHOOL TEACHER TRAINING INSTITUTE

Summer, 1973

Director: Elizabeth Broome, Consultant
Gifted and Talented Section
Division of Exceptional Children

Blank, Joan
Morganton Junior High School
Burke County Public Schools

Bryant, Ann
Josephus Daniels Jr. High
Raleigh City Schools

Constantine, Edith
North Asheboro Junior High
Asheboro City Schools

* Duncan, Barbara
Carroll Junior High
Raleigh City Schools

Ellerbe, Johnnie Mae
Red Springs Senior High
Red Springs City Schools

Gomez, Mary Sue
East Bend Elementary
Yadkin County Schools

Groff, Elizabeth
M.C.S. Noble 7th & 8th Grade Center
New Hanover County Schools

Murdock, Jerold
Eaton-Johnson Jr. High School
Vance County Schools

Newsome, Mercedes
Chestnut Street School
New Hanover County Schools

Page, David
Pinehurst Middle School
Moore County Schools

** Parrott, Glenn
Johnsonville Elementary
Harnett County Schools

Pridgen, Larry
Mary Potter Junior High
Granville County Schools

Somers, Shirley
Northern Nash Senior High School
Nash County Schools

Stanley, Linda
Vance Senior High
Vance County Schools

Stanton, Peggy
Vance Senior High
Vance County Schools

Transou, David
Fair Grove Elementary School
Davidson County Schools

Trexler, Ellen
Knox Junior High
Salisbury City Schools

Voyles, Sue L.
Middle School
Lexington City Schools

White, Paul
Morehead High School
Eden City Schools

Workman, Elinor
Barnes Elementary
Wilson City Schools

* Presently teaching at North Wilkes High School, Wilkes County Schools.

** Presently teaching at Woodlawn Elementary School, Alamance County Schools.

TABLE OF CONTENTS

	Page
Part I -- Basic Theories	1
Characteristics of the Gifted	1
Educational Taxonomies	1
Part II -- The Collection	7
Sounds and Images - Media	7
Inquiry Teaching	13
Lessons Using Williams' Model	16
Encounter Lessons	22
Simulation Learning Activities	27
Lesson Plans	41
Summary	56
Appendix -- Taylor's Totem Poles	57
Footnotes	58
Bibliography	59

PART I -- BASIC THEORIES

Characteristics of the Gifted

Even though much of the material in this book will be helpful to all teachers, the emphasis of the summer work was on the gifted and/or talented student. Many criteria have been developed to identify this student, but it is unnecessary to discuss thoroughly here all the ways and means for identification. However, we do want to include some of the more common characteristics that are repeated in studies by researchers: (1) curiosity (2) initiative, (3) originality, (4) likes challenge, especially mental, (5) synthesizes -- combines elements of materials or knowledge in new ways, (6) leadership ability, (7) flexible and fluent thinker, (8) sensitivity to and awareness of his world (9) academic ability, (10) multi-talent potential.

The Teacher Training Institute was concerned with the idea of multi-talents, the discovery and development of more than academic talents. Calvin Taylor's work was the basis for the brief study. (See Taylor's Totem Poles, Figure 1, p. 63.) The results of Taylor's study indicate that 90 percent of all students are above average in at least one of the six talents he researched. For educators, the implications should encourage teaching for the development of many talents in many students. The Institute participants produced some lesson plan ideas hoping to use more talents in their classrooms than previously used.

Educational Taxonomies

The Institute teachers have felt that theory gave them purpose for all the techniques we study. Even though many teachers have been using these theories for years, they discovered that verbalizing and organizing the ideas reinforced their thinking about their methods and also gave them courage to change where needed. Following are brief summaries of several theories which the 1973 Institute teachers feel are important.

From Taxonomy of Educational Objectives: Handbook I: Cognitive Domain, edited by Benjamin S. Bloom, et al.[1] The summary is from a handout prepared by the staff of the Gifted and Talented Section. It consists of explanations of six levels of thinking in the cognitive domain.

1. Knowledge: In the Taxonomy, Knowledge refers to the ability to recognize or recall information. It should not be confused with a philosophical definition. Teaching this phase of the taxonomy merely involves "pouring in" information.

This phase of instruction is usually accomplished in a formal setting. It can be accomplished with very large groups.

A. Activities usually done by student: (1) responds to classroom situation--is attentive, (2) absorbs information--looks, listens, reads, (3) remembers, (4) practices effective procedures--drills,

recites, (5) covers information in books, (6) recognizes information that has been covered.

B. Evidence of student's success: (1) completes class and homework assignments, (2) completes programmed learning sequences, (3) scores satisfactorily on objective tests.

C. Activities usually done by teachers: (1) directs student activities, (2) gives information--lectures, drills, (3) shows information--audio-visuals, demonstrations, (4) enlarges information, (5) makes and administers objective tests, (6) makes homework assignments.

D. Sample questions: (1) What is the formula for finding the circumference of a circle? (2) What are the three types of burns and standard treatment for each? (3) What nations cooperate in the European Common Market? (4) What is the Haber process for making nitrogen?

2. Comprehension: Comprehension represents the lowest level of understanding. The student should be able to make some use of the knowledge that he has gained, but he may not necessarily be able to relate it to other material or see its fullest implications.

This instruction is usually accomplished in a formal setting with a group no larger than a typical class.

A. Activities usually done by student: (1) explains information rather than merely quotes it, (2) makes simple demonstrations, (3) translates information into his own words, (4) extends information to new situations, (5) interprets information from technical terms to familiar terms.

B. Evidence of student's success: (1) has the ability to intelligently discuss information, (2) can write simple essays, (3) scores satisfactorily on objective tests.

C. Activities usually done by teachers: (1) demonstrates material, (2) listens to students, (3) asks questions, (4) compares and contrasts students' answers, (5) examines students' ideas, (6) makes and administers objective tests and low level essay tests, (7) makes carefully selected homework assignments.

D. Sample questions: (1) Explain the meaning of flag signals. (2) Change a written math problem into a formula. (3) What is the meaning of "your rights stop where my nose begins"?

3. Application: Application refers to the ability to use abstractions in particular and concrete situations. An example of this phase could be the using of an abstract mathematical formula to solve a specific math problem. In this phase instruction is usually rather informal. It is readily adaptable to laboratories, shops, the field, the stage, or to small groups within the classroom.

A. Activities usually done by student: (1) solves novel problems, (2) constructs projects, models, apparatus, etc., (3) demonstrates use of knowledge.

B. Evidence of students' success: (1) masters problem-solving tests, (2) constructs equipment, models, graphs, etc., (3) demonstrates ability to use equipment.

C. Activities usually done by teacher: (1) shows students ways to facilitate their work, (2) observes students' activities, (3) criticizes students' activities, (4) helps design students' projects, (5) organizes field trips and contests.

D. Sample questions: (1) What could a fully clothed person do to remain afloat in water for several hours? (2) What general principles of learning can be used in improving reading?

4. Analysis: Analysis refers to the breaking down of a communication into its basic parts. This allows the relationship between ideas to be seen more clearly and allows basic arrangements to be studied. This phase of instruction is best conducted in an informal and irregular manner. Small group and independent study techniques are especially useful here. Homework assignments directed toward analysis have been especially valuable.

A. Activities usually done by student: (1) discusses information in depth, (2) uncovers interrelationships among ideas, (3) discovers deeper meanings and insinuations that were not apparent at first, (4) sees similarities and differences between styles.

B. Evidence of students' success: (1) makes effective outlines, (2) writes effective précis, (3) completes effective experimental write-ups.

C. Activities usually done by teacher: (1) probes, guides and observes students, (2) acts as a resource person, (3) plans for and conducts discussions, seminars, and group critiques.

D. Sample questions: (1) What are the elements of the nitrogen cycle, food chain, taxation, and inflation? (2) Look at the "Mona Lisa" and tell which elements and principles of art were used by the artist.

5. Synthesis: Synthesis is the putting together of elements or parts so as to form a whole. It is the arranging and combining of pieces to form a pattern or structure that was not clearly evident before. This phase of the Taxonomy is especially adaptable to independent study. It can be accomplished in almost any setting including the home. The library is especially useful. Much reflection is generally required--these results often come slowly. Patience is necessary.

A. Activities usually done by student: (1) produces unique communications, (2) formulates new hypotheses based on analyzed information, (3) makes discoveries and generalizations,

(4) shows relationships between ideas and philosophies,
(5) proposes new ways of doing things.

B. Evidence of students' success: (1) activities (as above) effectively completed, (2) writes quality essays and term papers, (3) makes blueprints or sets of plans for projects.

C. Activities usually done by teacher: (1) extends students' knowledge, (2) analyzes and evaluates students' work, (3) prepares reading lists--including critical questions, (4) brings in consultants, (5) plans seminars, (6) allows for independent study.

D. Sample questions: (1) Combine poetry, modern dance, music, and colored light into a presentation which emphasizes basic principles of American democracy. (2) Create a 3-D object which highlights Einstein's fourth dimension.

6. Evaluation: Evaluation involves making judgments about the value of materials, methods, or ideas for a given purpose. This represents the highest level of intellectual functioning. This process is difficult for even the brightest students. Results should not be expected to come quickly. Students should not feel rushed. This phase must be taught in a very informal manner and is handled best in small groups.

A. Activities usually done by student: (1) makes firm commitments, (2) judges quality based on sound criteria, (3) effectively supports or disputes ideas, theories, etc.

B. Evidence of students' success: (1) Oral and written critiques are logical. (2) Speeches and essays are based on sound information. (3) Projects are completed successfully. (4) Performance is effective (athletic, artistic, musical, etc.).

C. Activities usually done by teacher: (1) accepts students' ideas, (2) plans competitive essay assignments, (3) plans tournaments (speech, debates, etc.), (4) helps establish criteria for evaluations.

D. Sample questions: (1) Decide whether or not the film Hawaii is an accurate portrayal of Hawaiian life at the time of the early missionaries. (2) Decide whether or not the United States should supply fish protein to persons in underdeveloped countries. What might be some repercussions from this act? (3) List some of our current national problems in order of importance.

From Taxonomy of Educational Objectives: Handbook II: Affective Domain by David Krathwohl, et al. The subcategories represent a continuum of feeling or action.[2] There are five levels of feeling explained in the affective domain.

1. Receiving: The teacher's concern at this level is that the learner be willing to receive the stimuli. The student's previous experience will affect his willingness to attend, either facilitating or hindering. The continuum begins with a very passive role and extends to the point that the student is attentive toward the stimuli.

A. Awareness: Learner is merely conscious of something; responsibility rests with the teacher for capturing the student's attention.

B. Willingness to receive: Learner is still passive, but does not avoid the given stimulus.

C. Controlled or selected attention: Learner selects the given stimulus despite competing stimuli and distractions.

2. Responding: The teacher who has "interest" objective is working in this category.

A. Acquiescence in responding: Learner complies as obeying class regulations even though he does not see the necessity.

B. Willingness to respond: Learner chooses to respond by his own conviction -- not from fear of punishment.

C. Satisfaction in response: Response involves a feeling of satisfaction; learner finds pleasure in reading for recreation.

3. Valuing: Learner decides behavior has worth. The decision may be a social product as well as individual. Behavior begins to stabilize and become consistent.

A. Acceptance of a value: Learner is still willing to re-evaluate values.

B. Preference for a value: Learner actively seeks out behavior such as assuming responsibility for including all persons in a group in a discussion.

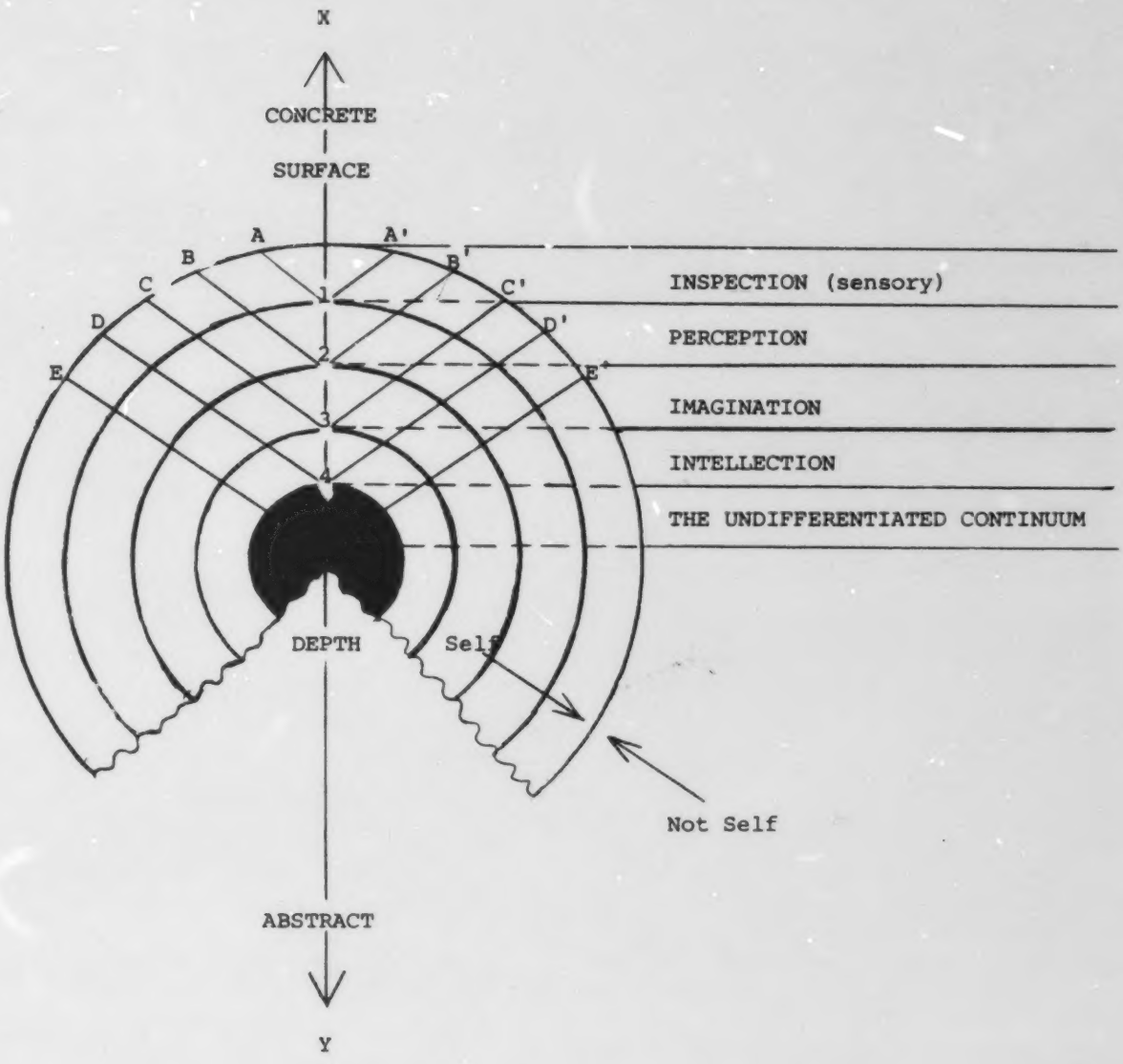
C. Commitment: Learner has conviction that his belief should be shared by others; motivation to convince others.

4. Organization: More than one value may be involved in some situations; thus, the learner has to see how one value relates to another. He begins to establish dominant values and to set priorities in his philosophy.

5. Characterization: Values have been internalized by the learner to the point that he is characterized by them; the values control his behavior. These values control his view of the universe, his philosophy of life.

The Governor's School theory is based on the "Model of the Mind" developed by Dr. Michael Lewis, Coordinator of Curriculum for the Governor's School. The gifted/talented students will think in the depth area, in the abstract, more often than other students. As teachers, we can encourage and provoke even more depth thinking. Following is a brief explanation of the model of the mind, quoted from Dr. Lewis.[3]

Levels of mental function: (1) inspection -- pure reception of sensory data; the "factual" level of existence, (2) perception -- the addition of certain theoretical dimensions to inspection (beginning of an awareness of the third dimension of space), (3) imagination -- the memory of sensory images which requires greater abstraction than perception, (4) intellection -- imageless thought (or postulational thought), (5) undifferentiated continuum -- that portion of the mental functions which seems unstructured. It is that area of mental functioning which enables the restructuring of a situation without being bound by the existing structure. However, the restructuring takes place only when one returns to the concrete, factual world.



The taxonomies may seem to put life in a strict, ordered pattern. Actually, there is much overlapping among and within the various taxonomies. The relationship between these two taxonomies offers some questions that may well be important to teachers: Are we teaching the higher levels of thinking (cognitive domain)?* Are we considering the affective domain in our planning? Does a student learn more easily and better when he wants to learn? Does the affective domain help us prepare lessons so that the student wants to learn? What level of the affective domain do we reach with our students; can we get past the receiving level -- or perhaps the responding level? The remainder of this publication is the Institute teachers' answers. They have incorporated as much as possible in the activities and lesson plans that they developed.

PART II -- THE COLLECTION

This section consists of materials written by the Institute teachers. As various methods, techniques, and theories were studied, the teachers developed plans and activities in their own content area. When time permitted, many of these items were tested with Governor's School students or with the Institute members. We hope that you will find practical suggestions that you can use.

Sounds and Images - Media

Media should be studied as an art in itself. Twentieth Century society demands this recognition because of the role media has taken in this technological age. The value of media should not be compared to or confused with literature, art, or music; media has its own unique value standards.

Media has a special appeal for the student because he can relate it to his world. One student may develop an interest in a given subject area if he is allowed to interpret his understanding through media methods. Another student who is not fluent in written communication can express his ideas through audio or visual methods. The technological aspect can motivate the student who is mechanically oriented.

With this in mind, would you as a teacher accept a media project rather than a traditional research project? Perhaps after reading the following suggestions, you will feel that media is as much a part of our curriculum as it is a part of our society.

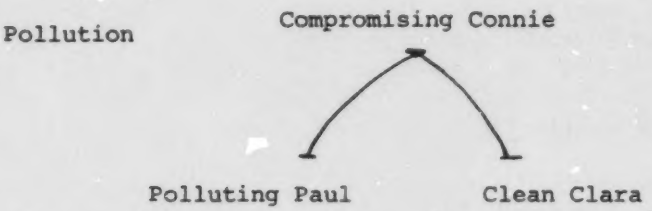
Films: The major emphasis of study was on new ways to discuss films, how to use a film for something more than a time filler. Dr. Sterling Hennis, Professor of English Education, UNC-CH, introduced the Institute teachers to innovative media uses. Discussion of a film was based on the sounds and

*Classroom Questions - What Kinds? by Norris M. Sanders is a practical guide to asking questions on all levels. (Harper and Row, New York)

images instead of the usual content questions; out of sounds and images came content. The following ideas for film discussion were compiled by Shirley Somers from the book Seeing with Feeling by Richard A. Lacey.[4]

Ways to deal with film:

1. Talk about feelings surrounding whatever interests students at the moment--the thing that stood out in the film.
2. Here-and-Now Wheel--Students write on spokes of wheel about particular parts of a film (identifying feelings).
3. Talk about feelings that students get from documentaries.
4. Before-After Exercises--dramatization, role-playing, discussion, writing - role-playing--Set up situation similar to one in film and role play before and after viewing film and notice differences. writing--Write word about film on board (such as subject pigs from film PIGS!). Let students jot down figurative language, free associations, and details that come to mind. Repeat exercise after viewing; second exercise will reveal greater range of association and detail and fewer stereotypes and clichés.
5. Value Clarification--value continuum--Take an issue from a film and before showing, make a continuum showing extremes. An example follows:



Let students show where they stand. Show film and discuss any change in values or why students remain at the same place on continuum.

6. Feedback--Show films that relate to classroom or school and let student point out similarities between film class and his class. Let him tell how he feels about it and discuss possible change.
7. Comparison and Contrast--(of several films)--Point out what is not obvious in comparison and contrast; reveal differences within similarities, similarities within differences.
8. Study elements of movies--shots, scenes, sequences, composition, rhythm, pace, lighting, color, tempo, symbolism.
9. Stop a film. Do this to discuss director's way of creating and resolving cinematic tensions and effect of these on audience--ONLY STOP FILM AFTER AT LEAST ONE COMPLETE SHOWING!
10. Sound--Cut sound off and show film. Try new sound with film.
11. Multi-media/Multi-screen--Use various films at once and create one sound to accompany.
12. Fishbowl--two circles: one group on outside observing, one on inside discussing: then switch roles -- Have students look for roles of members (group dynamics skills).

(For further explanation of using films, see Seeing with Feeling by Richard Lacey.)

To make films more interesting, critical viewing is suggested. The guideline that follows is from Dr. Hennis.

Name of film _____ Producer _____

Length _____ Color _____ Black and white _____

I. 1. Motion was created by:

___a. motion of subject ___c. motion of camera

___b. motion of background ___d. motion of editing

(Note: If one method was used predominantly, place a check mark opposite the appropriate category. If two or more methods were used equally, place a check mark opposite each such category. If two or more methods were used but their use varied quantitatively, rank them by placing one, two, three or four check marks opposite the respective categories.)

2. Indicate one incident in the film which illustrates the predominate use of one of the above. _____

3. Why do you feel this method of creating motion was used? _____

_____

II. 1. Sound was created by:

___a. dialogue ___c. music

___b. environmental sound ___d. periods of void; other

(See note, section I, 1 above for directions.)

2. Why do you feel this method was used? _____

III. Indicate how this film makes use of:

1. angle _____

2. lighting _____

3. color _____

4. distance _____

IV. What do you think was the intent of the film maker?

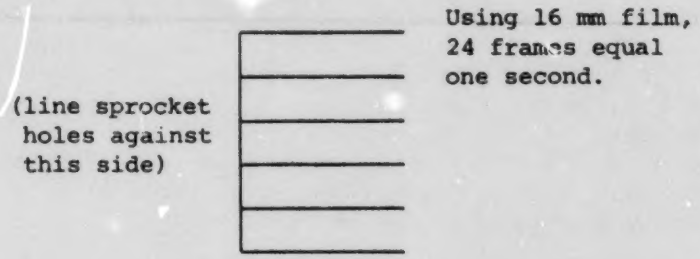
_____

V. What "key word" would you use to describe best the theme of this film?

_____

Having students produce their own films is an exciting and worthwhile experience. The planning, script rewriting, organization, etc., provide a "composition" practice that will interest many students. Athletic departments sometimes have a movie camera that might be shared.

Another "film making" idea makes use of old film.* Again, the athletic department and perhaps film libraries provide a source. Bleach the old film by dipping it in chlorox and wiping off the emulsion. (Check the film often so that the solution does not destroy the film.) Cut the film in pieces about one to two feet long. Each student then draws on the film, using visual marker pens. Creativity is encouraged; he may draw abstracts, pictures, squiggly lines or whatever he wants to. Each "picture" needs to be repeated at least three times in order to be seen on the screen. Each student will need a full-page guide like this:



Splice the pieces and show the "movie." This activity may be used as a creative exercise in itself or to trigger other creative ideas--stories, music, etc.

VTR: Contrary to popular belief, television is not the newest educational gimmick on the market today. Television is no more new to our students than grass and trees; it's an element they have been exposed to for an average of 26 hours per week of their whole life experience. Television is obviously not a gimmick; it teaches us without our even taking notice. Few children sing nursery rhymes; rather they chant "McDonald's is that kind of place ...," "I'd like to teach the world to sing ...," etc. Fact is, it's here; it's been using you; why not use it before it replaces you?

The Video Tape Recorder (VTR) is a simple, economical, and practical way to bring television into your classroom. Any elementary student can operate a VTR if he is given the chance. The VTR is well within financial reach of most school systems. For around $1,200, all basic equipment can be purchased. If this sounds a bit steep, remember that the tapes are reusable. A 30-minute tape costs about $10 and can be used for an infinite number of productions; a 30-minute commercial film costs about $200 and is restricted to only one program.

The VTR has many practical applications. Try some of these; then make up your own: (1) taped mini lessons for "slow" students to review or for "fast" students to study independently, (2) dramatic productions, (3) study of advertisements, (4) replay of commercial programs (It's not a wasteland.), (5) independent study projects--Have a student produce a program on local pollution; it surely beats listening to a report. (6) If a student is too shy to go on camera, let him be someone else's voice. (7) animations,

*From Bob Gregory, Consultant, Television Services, State Department of Public Instruction.

(8) a setup of a school TV station giving a daily broadcast of news, weather, sports during homeroom, (9) production of own soap operas based on school romances, (10) game or quiz shows to reinforce material studied.

Audio-tape recorder: A number of interesting studies can come from an exercise using various musical excerpts. Characterization and stereotyping can be dealt with by taping unfamiliar music of different types and having students tell the name of the woman, car, food, city, etc., that it represents. If the name of a woman is identified, the students can suggest what kind of car she drives, where she lives, her occupation, etc.

The audio-tape recorder can also be used in multi-media exercises. For example, students can tape music to accompany their own movie, a commercial movie, or slides. Taped music provides inspiration for creative writing also.

Record player: Due to the frequent uses of record players in the past, students will probably be more stimulated by the record player being used in multi-media situations. For example, a history teacher might play excerpts from a speech to two groups at different times showing a different picture to each group as they listen. The groups will then discuss their impressions of the speech, relating it to the picture they saw. This should provide interesting reactions for discussion.

Overhead projector: The overhead projector is one of the most useful tools with which the teacher works. Unfortunately, most of us use it only to display a lesson and then put it away until next time. There are some other ways to use the overhead which will spark the imagination of the students.

One use of the overhead is in a shadow game. Shapes can be cut out and placed on the projector. The students then can be asked to tell or write about these shapes. These outlines can be random shapes, or they can be specific shapes used to illustrate a point or a story.

Food coloring can be used on the overhead. Place a few drops of water and food coloring on a transparency. Then take a toothpick and swirl the colors together to make beautiful and colorful designs which can lead to interesting classroom discussion and eager participation.

Design creation is another facet of the overhead. A transparency with just a few lines on it can be projected. The students can then be asked what this abstract design means to them. One can come to the projector and bring this abstract design to a concrete from so that the rest of the class can see what he saw.

These are just a few different uses of the overhead projector. See how many uses you can add in your classroom.

Opaque projector: The opaque projector sometimes puts life into a dull part of the English class. After the themes have been turned in, the students feel their part is finished. With the opaque, this is not always so.

If the theme topics are varied so that the interest of the class will not sag, the grading can be done in class and made a very useful learning experience. Each page can be projected on the chalkboard. The class can then read the themes. The good points and bad points can be discussed. Each error in grammar can be corrected in chalk on the board. When the projector is cut off, the student can see in a vivid way how much correction was needed per page. One of the best parts of this is that it can be used at any time. Grade a few papers, then stop. You will find the class anxious for the next session with the opaque. And it helps you get the grading finished.

Another use of the opaque is to cut shadows of the students' profiles. The projector can be left in the back of the room. When the students have some free time, they can sit in front of it and project their profile on a piece of paper. A second student then outlines the profile. The picture is then taken down, cut out, matted, and displayed on the "shadow wall."

Newspaper: The following are suggested newspaper activities: (1) Have students plan (in groups) a menu for the week; then take the Wednesday or Thursday paper and assuming they have $30 to spend, plan their grocery list and where they will buy. (2) Want ads may be used as a study of job requirements or for consumer education (how to buy a car). (3) Headlines can be cut from the paper and students write the story, or stories can be given out and students write the headlines. (4) Cartoons can be cut out and students write captions. (5) A headline news story can be followed for its duration. (6) Two different newspaper accounts can be compared for the newspapers' biases. (7) Newspaper can be scanned for different types of information that can be obtained from it.

Magazines: Old magazines prove quite useful in a classroom. Some ways to use them include these ideas: (1) collage--possible subjects: parts of speech, values, introduce a unit, self-identification, stereotypes, and environment, (2) creative writing: character study from a picture, reading introductory paragraph from a story and letting students finish it, picture story sequence, artistic criticism of details in a picture, (3) advertising: fallacy application, sensual appeal, psychological appeal.

Miscellaneous: Use a Teletrainer available through Bell Telephone System for activities such as effective recording of messages, role-playing various types of conversation (business, emergency, survey, friendly), and studying careers and history of the telephone.

Photography may be used by the student to present a visual composition. A sequence of pictures in a booklet tell the story.

A look at the community often provides the teacher with resource people and facilities. This list was suggested by the Institute teachers: reporters, newscasters, local TV personalities, radio and television stations, authors, newspaper staffs, university specialists, local film services, libraries, and industry.

Perception Box: The perception box is a twentieth-century vehicle to convey and share ideas and stimulate immediate interest. It breaks down the

barriers which are often found between the student and subjects, classes, schools, inter-communities, intra-communities, age groups, and socio-economic levels.

The perception box allows involvement for students who are "turned off" by traditional methods of teaching. It encourages creativity and involves the efforts of many people.

The list below suggests ways in which a box can be used. However, this list is in no way complete, and you will undoubtedly find many other ways to use a perception box. Suggested topics for boxes:

- motivating device for a unit
- nostalgia box
- "future shock" box
- personal values box
- "try it, you'll like it" box (reading, student suggestions)
- inventions box
- signs and symbols box
- homemaker's box (fashion, cooking, decorating)
- "tune-in" box (music)
- media box
- board-of-education box
- stimulating creative writing skills
- inter-intra community awareness box (to be exchanged with other classes across the state or inter-state)
- "buddy" box
- comparative values box (parent-student, teacher-student, community-student)
- vocabulary box
- ecology box
- mystery box
- sports box
- anatomy box
- "turn-on" box
- art box

The following steps are a guide to making your own box and evolved from a UNC-CH methods class with Dr. Sterling Hennis as professor: (1) Find an empty cardboard container and bring it into the classroom. (2) Give them a topic, or ask them to choose one. It might be the Thirties, the Civil War, Food, or Civil Rights. Something B R O A D with many possibilities. Avoid topics like Holography and Henry the Eighth. (3) Ask them to scavenge in attics, rummage in libraries, second-hand book and record stores. Inspire them! The box must be filled to the very top. Allow them to work on their own and in groups. Lend them cameras and tape recorders with which to interview people. Put them to work writing letters to museums and art galleries for postcards. (4) Gather some material yourself. Concentrate on items which you can obtain more easily than they. Photocopy stuff in university vaults. Keep people busy without organizing. Let the stamp collectors collect stamps, let the cooks cook. Watch the box fill. (5) Stop the box-making when there are ten times as many items as there are people. Thirty members equal 300 items. Give a lesson topic; empty the box on floor for general inspection. Everyone doesn't have to see everything, but everyone should have the chance to see everything which interests him. (6) Put the box in the school library so that others can use it. Next year have a new class and add another 300 items. Make more boxes until the library contains more boxes than books.

Inquiry Teaching

One of the better means of guiding student learning is known as the inquiry process. This process provides a reliable tool of learning applicable to any subject matter at all educational levels.

It is based on sound principles of learning and should be continuously developed during the student's learning lifetime. Observe that the process encourages the use of any communication style that relates to the different personal learning and thinking processes described below:

1. identification of problems to study: awareness of need, interpreting, evaluation, decision making
2. collection and organization of known information concerning problem: remembering, arrangement, evaluation, decision-making
3. statement of hypothesis and possible conclusions: forecasting, decision-making
4. investigations to test hypothesis involving research: analysis, interpretation, synthesis, application
5. communication of hypothesis testing activities and final product to others
6. evaluation of total procedure.

The advantages of using inquiry were given in The Gifted Child Quarterly, Autumn, 1971. Positive aspects for student:

1. It encourages independent effort.
2. It broadens the range of thinking.
3. It encourages clear and logical thinking.
4. It is interesting and motivational.
5. It is a confidence-building tool.
6. It encourages utilization of new and varied sources of information.

Positive aspects for teacher:

1. It puts the teacher in a new role:
   a. guide to learning
   b. question-raiser rather than answerer
   c. listener
   d. forces out of a dominant strategy
2. It encourages teacher to utilize varied sources for materials.

The process follows this pattern:

I. Identify a topic to be investigated by the class, a group, or an individual student.
   A. Discuss present understandings and beliefs about the topic.
   B. Discuss what is not known and needs to be known.

II. Make a statement about the topic in the form of a hypothesis. This statement will be accepted as the student's best belief, whether right or wrong.

III. Begin investigations and study.
   A. Find evidence that proves hypothesis correct.
   B. Also find evidence that proves hypothesis incorrect.
   C. Use as many learning styles and thinking processes as possible.

IV. Make a decision concerning validity of hypothesis in the light of the evidence found that proves and disproves it. Don't be afraid to change opinions about first belief.

V. Communicate the study to the class in as interesting and personal way as possible. Use skits, models, charts, paintings, panels, debates, notebooks, bulletin boards, mobiles, as well as written or oral reports. Use as many communication styles as possible.

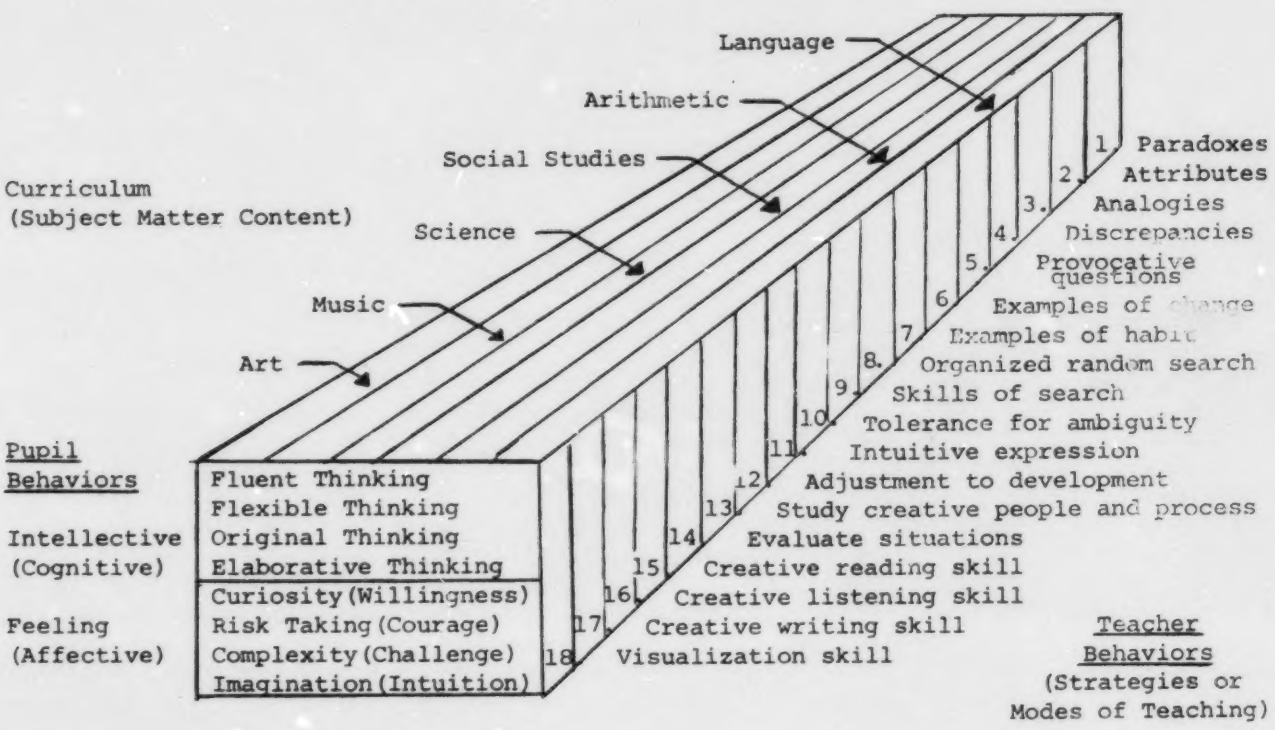
VI. Evaluation of total procedure:
- A. Quality of product and validity of process used
- B. Depth of study made by student
- C. Interest of topic and means of communication
- D. Practicality of study and product
- E. Degree to which study stimulates further learning

To use inquiry process as lesson plan: (Instructor, May 1972)

1. Decide on concept you want to teach.
2. Create appropriate and exciting activities to demonstrate it. Activities should include actual use of object or piece of equipment. Activity should be written clearly--series of steps.
3. Students should base their conclusions only on what they've discovered.
4. Let students research to establish validity of their conclusions.

W I L L I A M S ' M O D E L

THINKING--FEELING BEHAVIOR IN THE CLASSROOM



Lessons Using Williams' Model

After a study of Frank Williams' Model for implementing cognitive-affective behaviors in the classroom, the teacher may be confused as to how to use it in his lesson plans. This section gives "suggested teaching strategies to attain certain pupil objectives through use of subject matter content."[5]

Dr. Williams' explanation is as follows: "The idea format is simple, yet explicit and direct. Each idea is classified to indicate a cognitive, thinking process with an affective, feeling process. Certain teacher techniques are listed for developing pupil behaviors within the content areas of the curriculum. For example:

TO ENCOURAGE: Flexible Thinking and Curiosity
THROUGH: Social Studies
USING: Strategies No. 5 - Provocative questions
No. 11 - Intuitive expression
No. 18 - Visualization skill

The procedure is to get children to switch their thinking mode into various categories by suggesting a variety of responses (Flexible Thinking) while being inquisitive (Curiosity). The subject of the lesson idea is in the social studies. Three predominant strategies are: asking questions to bring forth inquiry (No. 5 - Provocative questions), appealing to children's expressions of feeling or emotion (No. 11 - Intuitive expression), and asking children to illustrate their thoughts or feelings (No. 18 - Visualization skill)."[6]

The Institute teachers developed lessons using the format as suggested by Dr. Williams. These lessons may be used as idea generators and creativity exercises or may be incorporated into a larger unit of work.

1. TO ENCOURAGE: Original Thinking and Imagination
THROUGH: Social Studies
USING: Strategies No. 5 - Provocative questions
No. 10 - Tolerance for ambiguity
No. 18 - Visualization skill

Ask students what subject is the least fun for them. Then, instruct students to invent a machine that will make learning more fun in that subject.

Contributor: Glenn Parrott

2. TO ENCOURAGE: Original Thinking and Imagination
THROUGH: English
USING: Strategies No. 8 - Organized random search
No. 11 - Intuitive expression
No. 18 - Visualization skill

Before the class arrives, put five words with which the students are probably unfamiliar on the board. These may relate to a planned lesson or serve as introduction to a vocabulary unit of study. When class begins, have students study the words and develop a definition from the connotation, root, prefixes, suffixes, etc. Then ask for a volunteer to pantomime his definition for each word. Follow up with checking the definition; see how "close" the students come to actual meanings.

Contributor: Linda Stanley

3. TO ENCOURAGE: Flexible and Elaborative Thinking
THROUGH: English
USING: Strategy No. 11 - Intuitive expression

Have the students "devise" a word; an example, fudpucker. Then have them develop a concept of the word. Define it; describe it; draw one if a noun; if a person, identify who is one, etc. Follow up discussion with process of arriving at concept.

Contribution from: Ralph Watson's Area II class, Governor's School (written up by Linda Stanley)

4. TO ENCOURAGE: Flexible Thinking and Risk Taking
THROUGH: English
USING: Strategies No. 3 - Analogies
No. 10 - Tolerance for ambiguity

When class begins, put the words "pain" and "pickle" on the board. Question: Which occupies more space? Write only one of the two words. Under that word, write down the other word and explain why it doesn't occupy more space than the first word you wrote.

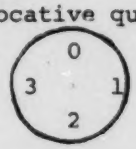
Then put the words "point" and "line" on the board. Question: Which is friendlier? Under that put the one you did not choose and explain why that one is friendlier than the one you originally put down.

Follow with discussions, questions, etc.

Contribution from: Betty Hobbs' Area I class, Governor's School (written up by Linda Stanley)

5. TO ENCOURAGE: Flexible Thinking
THROUGH: Junior High Mathematics
USING: Strategies No. 3 - Analogies
No. 5 - Provocative questions

Given the following clock:



1 o'clock + 3 hours = _____
2 o'clock + 2 hours = _____
3 o'clock + 3 hours = _____

Can you think of a situation in which 4 + 6 = 3? or 5 + 5 = 2? What is 8 a.m. + 6 hours equal to on our 12-hour clock? Can you devise or find other number situations which give unusual sums other than clocks?

Contributor: Paul White

6. TO ENCOURAGE: Fluent Thinking and Curiosity
THROUGH: Language Arts, Social Studies, Science
USING: Strategies No. 9 - Skills of search
No. 12 - Adjustment to development

Have the students divide into groups and choose ten new words that have entered our vocabulary in the last five years. Students then research the etymology of the words and make models (collages, photographs, drawings, etc.) to represent each word. They may then introduce these to the class.

Contributor: Elizabeth Groff

7. TO ENCOURAGE: Original, Elaborative, and Imaginative Thinking
THROUGH: English
USING: Strategy No. 10 - Tolerance for ambiguity
1. Use film Lady or Tiger?
2. Student follows stream of consciousness of one character--tiger, other--woman, ruler, etc.
3. Student analyzes elements that affected that character's actions and/or attitudes.
4. Student synthesizes an ending that would point out his character's position.
5. Endings may be presented in role-playing situations.
6. Group evaluates pros and cons of each lesson.

Contributor: Barbara Duncan

8. TO ENCOURAGE: Original and Elaborative Thinking
THROUGH: English
USING: Strategies No. 11 - Creative listening skill
No. 12 - Adjustment to development
No. 14 - Evaluate situations
No. 17 - Creative writing skill
No. 18 - Visualization skill

Using loneliness as a topic, here are several exercises which may be beneficial to you in this unit.

1. Tape various sounds associated with loneliness and have students respond with creative writing.
2. Select music for the lonely, pick a title for an album and illustrate a jacket cover.
3. Present and/or have students think of various lonely situations and expand on idea. Example: A person is isolated in hospital with a serious disease.
4. Present and/or have students think of various lonely occupations. Example: lighthouse keeper, night watchman, or writer -- Write on pros and cons of such occupations.
5. Use "as lonely as what" questions. Example: as lonely as an empty auditorium
6. Put up a bulletin board with pictures that fit various moods.
7. Present a hypothetical situation to be expanded. Example: You are an advisor on the midnight shift at a crisis center. The job of the counselor is to give enough confidence to a young woman contemplating suicide so that she will forget the idea. Create the dialogue between the young man and the counselor and act it out.
8. "Put yourself up a lonely" exercise(s).
   a. Show series of pictures. Have students pick one lonely person, put himself in his place, and write a diary entry.
   b. Walk home alone and cut yourself off from friends. Change appearance in familiar situations.
   c. In "three faces of me" exercise, choose three situations in which you adapt your behavior or attitude.

Contributor: Ann Bryant (Compliments of Dr. Betts)

9. TO ENCOURAGE: Original Thinking, Flexible Thinking, Elaborative Thinking, Imagination
THROUGH: English (Creative Writing)
USING: Strategies No. 5 - Provocative questions
No. 10 - Tolerance for ambiguity
No. 11 - Intuitive expression
No. 17 - Creative writing skills

1. Write one obvious answer to the following kinds of questions (any number up to 10 can be used). Write the first thing that comes into your mind. Example: Why do doors have locks? to keep out people who shouldn't open them
   a. Why do people sleep?
   b. Why do dogs make good pets?
   c. Why do dress lengths change?
   d. Why do doctors wash their hands so much?
   e. Why do we use forks?
2. Pick two (or three) questions from the list and fill in the space below. Write as many more answers as you can.
   Question:
   First answer:
   Additional answers:
3. Compare your answers with others in the class.

Contributor: Joan Blank (idea from Writing Step by Step, Raths and Altshuler)

10. TO ENCOURAGE: Fluent Thinking, Original Thinking, Curiosity, Imagination
THROUGH: English (Creative Writing)
USING: Strategies No. 1 - Paradoxes
No. 3 - Analogies
No. 8 - Organized random search
No. 10 - Tolerance for ambiguity
No. 11 - Intuitive expression
No. 14 - Evaluate situations
No. 15 - Creative reading skills
No. 17 - Creative writing skills
No. 18 - Visualization skills

Bring into the classroom a box full of pictures glued onto some stiff paper. (I use the papers that hosiery mills use in packaging panty hose.) You may use just the picture, or you may write comments or questions near the picture.

Let the students browse until they find something that catches their fancy; then have them write a paragraph, story, poem or descriptive passage about their reactions.

Availability is the name of the game, and they'll play it willingly.

Contributor: Joan Blank

11. TO ENCOURAGE: Curiosity (Willingness), Risk Taking (Courage) and Flexible Thinking
THROUGH: English (or any other discipline)
USING: Strategies No. 5 - Provocative questions
No. 11 - Intuitive expression
No. 14 - Evaluate situations

(11. continued)

Ask students to number on a sheet of paper from 1 to 20 (fewer or more if they wish). Ask them to list twenty things that they love to do. (A person may be mentioned, too.) Just list them as they think of them; do not judge or evaluate the items; just be honest.

The following are some of the qualifying indicators that may be used after the listed item in order to operate on the emotional, affective level: ($) if the item costs more than three dollars; (A) if alone; (P) with people; (AP) alone and with people; (PL) if it takes planning; (U) if it is unconventional; (MT) if you would like to have more time to do it; (PU) if most people would consider it puritanical; (B) would like to do it better; (N5) would not have been on the list five years ago; (S) if it is seasonal; (RE) reject--would like to get it off the list; (F) probably will not be on the list five years from now; (L) the person you love the most (if you have person(s) on the list). Other signifiers may be given to the class, of course.

Next, have each student evaluate his list by putting 1-5 in front of the five things (or persons) he loves the most.

Ask, "Who is willing to take the risk and have his list read silently by someone else in the class?" Then have the writer explain why he selected that particular person; also, have the receiver tell how he feels about the confidence placed in him. Ask the writer whether he is willing to have his list read to the class. Then have the receiver read the list of the 1-5 items and tell what signifiers are on each. Ask for feedback from the class. Then have each student speculate about what else is on the list. Feedback and discussion continue on these.

The teacher has to be careful, of course, to use this only in a classroom where the atmosphere is one of caring and sharing. The teacher also has to know intuitively how far such a discussion can be carried. (It is interesting for the teacher to make a list too, but let the students be the ones to take the risk!)

Contributor: Peggy Stanton (as a participant in Jim Wilhelm's Area III class at Governor's School, 1973)

12. TO ENCOURAGE: Fluent and Flexible Thinking
THROUGH: Social Studies
USING: Strategies No. 2 - Attributes
No. 3 - Analogies
No. 13 - Study creative people and process

This activity is a large part of a unit on discovery and exploration of the New World. Make available much material on the lives of the early explorers, but to broaden the base of the lesson, include also much material on latter day explorers and inventors (Byrd, Fulton, Einstein, Salk, Edison, Lindbergh, etc.). Ask each student to choose one explorer or inventor and to find out as much about him as he possibly can. After individual research, a series of small group and large group discussions should be planned. These discussions should lead to a listing of the commonalities in the lives and personalities of many of these explorers and inventors.

Contributor: Larry Pridgen

13. TO ENCOURAGE: Fluent, Flexible Thinking
THROUGH: Social Studies
USING: Strategies No. 5 - Provocative questions
No. 10 - Tolerance for ambiguity
No. 14 - Evaluate situations

There is a ship leaving your home country to plant a colony in the New World. You want very badly to be in that colony. There is only one space left aboard the ship, and many people are trying to get it. It is your job to convince the captain that you can contribute something positive to the new colony and be allowed to go.

Variation: The same situation as above. This time you are already a member of the colony. You have a very close friend who wishes to go. You must speak for him and convince the captain he should be allowed to be a member of the colony.

In this version the friend for whom you speak should be the person in the group that you do not know, or know the least. You will be given three minutes for each team to talk before the "selling" part of the exercise starts.

Contributor: Jerold Murdock

14. TO ENCOURAGE: Flexible Thinking
THROUGH: Social Science
USING: Strategies No. 10 - Tolerance for ambiguity
No. 14 - Evaluate situation

Teacher brings a rope to class. She will ask the students to write down the various ways in which the rope can be used. For every positive use, the students must write a negative use. The teacher then asks, "Is the rope good or bad?"

Contributor: Merecedes Newsome

15. TO ENCOURAGE: Flexible Thinking, Curiosity, and Complexity
THROUGH: English
USING: Strategy No. 17 - Study creative people

1. Brainstorm -- Class offers names of people considered to be creative. All names are listed on board without value judgments at this time.
2. Divide class into groups of four. Compile a list of values that are exemplified by this group of people.
3. Synthesize -- Why is it sometimes difficult for creative individuals to fit into society?
4. Use creative individuals for biographical reading.
   Purpose -- to find out how certain traits or values come out in their lives
   Evaluate -- Write a short paper to explain how that individual used his talents productively or nonproductively.
5. Use to introduce section on Industrial Revolution or literature unit on biography, etc.

Contributor: Barbara Duncan

Encounter Lessons

Dr. Dorothy Sisk gives this explanation for encounter activities:*

"The use of man's inner strengths and his perception of these inner strengths aids in the further development of his feelings about himself or what can be called self concept. If one values himself, believes himself to be capable, and generally expects to succeed in what he attempts, he is more free to venture into the unknown, challenging himself with new goals. Man achieves using his individual creative power as a result of using his individual strengths.

"An encounter lesson is a lesson based on four principles which can be expressed in terms of teacher behavior. The teacher will:

1. help the student think about who he is and what he can and ought to do.
2. help the student to feel valuable and worthwhile.
3. help the student to see learning as relevant to his individual needs.
4. help the student to develop and maintain a learning atmosphere that reflects psychological safety and freedom.

"Encounter lessons are of short duration, lasting from twenty to thirty minutes. They are an 'involving' activity in which the students, usually in small groups of 8-10, actively see, hear, taste, touch, smell and react to central stimuli. The objective is an 'encounter' with the stimulus, ideas and others. The activities should be as open-ended as possible, thus providing each child an opportunity to bring his uniqueness to the task."

Encounter lessons may be used to introduce group members, to increase understanding within a group, and to promote interest in subject matter through improved self-image. Most of the encounter lessons included in this publication were written within a subject-matter framework. Following are some examples:

1. "Nonverbal Communication" - Use this activity in a group where a majority of the people do not know each other. After the group has assembled, ask them to select the person they feel most comfortable with in the group. In doing this they cannot speak and must not choose someone they already know. After the activity is over, have them explain why they decided the way they did. (Note: One person may be chosen by one or more other people.) Contributor: Glenn Parrott

2. "Eyes" - Cut eye sections (from nose to forehead) from magazines. Try to get a variety by choosing different facial expressions. Pass these sections out to either individuals or groups. Then ask them to decide what mood is suggested by the eyes or in what situation that person is involved. Variations: (1) Ask students what role this person fills in society by looking at the eyes. (2) Ask students to tell how the eyes make them feel. Contributor: Glenn Parrott

3. "Confusion" - Divide the class into five groups. Give each group a stack of magazines. Each group is to create a collage of pictures, words, etc. that will get across the idea of "confusion." After each group finishes its collage, each person in the group must explain why certain pictures or words were chosen to represent that particular idea.

*Dr. Dorothy Sisk is Coordinator for Gifted Programs for Exceptional Child Education at the University of South Florida, Tampa, Florida.

This may be used to introduce various abstract ideas--happiness, love, loneliness, etc. The students will be able to express concrete things that relate to the abstract. Contributor: Barbara Duncan

4. "Behind the Mask" - Ask students to bring in photos from magazines showing a singular person or face. In class, students are requested to write a paragraph describing the personality of their photo face. Each student reads his paragraph to the class and shows the photograph. Instructor and students may ask other questions about this "person." "What is his religion?" "What is his goal in life?" "Is he happy now?" "What does he like to do most?" Responses by the paragraph writer will begin to show characteristics of the writer through the mask of the photo. Contributor: David Transou

5. Divide into groups of 4-8. Pretend that each group is preparing to be enclosed together for six weeks in a fallout shelter to avoid a radiation invasion which will begin in 24 hours. The group may choose three objects to take for amusement during their isolation. A unanimous decision must be reached on each object. Time limit: 12 minutes
Contributor: Elizabeth Groff

6. Divide a large group into smaller groups of from 3 to 7 people. Each group is to pretend that it is a new nation which has just received its independence. Each group must then do one or more of the following things: (1) Design a flag. (2) Choose music to express the theme of the new country or choose music for the new national anthem. (3) Pick a motto. (4) Decide upon the form of government. (5) Decide upon the military setup and requirements. (Do not try to do all of these at one time.) A spokesman is then chosen from each group to present to the whole class the selections and the reasons for the selections.
Contributor: Elinor Workman

7. "Toy Factory" - The Fisher Price Toy Industry plans to open a factory in Saudi Arabia. Because of your creative ability and position with the company, you have been asked to design a toy suitable for massive sale in Saudi Arabia. You should include the toy's qualities and the advertisement for it. Present your toy in your group; then the group must come up with a composite toy, its qualities and advertisement.
Contributor: Mary Sue Gomez

8. "Mission: Number System" - Situation: A planet has just been discovered which has an intelligent life form. You have just returned from a visit to the planet and are part of a committee selected by the Federation of Earth Government to aid the new planet in intelligent growth. Your mission is to help them develop a number system that will facilitate their intellectual growth and achievement.

   Method: Students are divided into groups of five. Each group is to devise a number system and some of its properties that would enable the new-found beings to develop so that they could merge into the intelligent life community. After approximately 20-25 minutes, group discussion should stop and each group present its decision to the class.

   Purpose: It is hoped that the students will see the reasons why our number system developed and will try to help these beings develop a system of their own instead of forcing our system on them.
Contributor: Paul White

9. Objectives: (1) to create an awareness of self and others by the use of words which show value and worth, (2) to stimulate creativity in a group interaction experience

Instructions: Give each member of the group an index card. Ask the following boundary breaking questions and tell the group to write their answers on the card: (1) What is the most beautiful sound you have ever heard? (2) What is the ugliest thing you know? (3) Select a word that you feel best describes people of your age. Divide the class into small groups of 3 or 4. Inform each group that they are to create a poem using the words they have written on the cards. Give them the following rules: (1) Every word written on a card must be used. (2) The cards of all members of the group must also be used. (3) No specific style or form is required for the poem. Allow each group about twenty minutes. Ask each group to select someone to read its poem. After the poems have been read, ask each group to respond to the following questions:

1. Which answer surprised you the most in your group?
2. What word in your group was most difficult to use?
3. Did any of the members of your group have any words in common?
4. Which person do you think is the most sensitive to life?
5. Which answer, from another member of your group, pleased you the most?
6. Which person in your group seemed to be the leader?
7. Which person do you think had the deepest insights?
8. Who decided the form of your poem?
9. What person did you learn the most about in your group?

(At this point, the leader may want to ask more questions about creating a poem. This is left to the discretion of the leader and his purpose for the lesson. However, this encounter lesson is designed so as to allow the leader to move into creative writing.)

Contributor: Johnnie Ellerbe

10. Divide the class into groups--no more than 6 students to a group. Assign a poem to each group and tell groups to keep their poems secret. Each group is supposed to express or reinforce the meaning of its poem through some other medium: photographs, collages, films, songs, drama, dance, etc. As examples of reinforcement, the teacher might cite Newport and Salem ads with the cool greens and blues suggesting the effects of menthol. Coke and Pepsi commercials with familiar, friendly, concerned tone through photography and music are also examples. A "game" might be made out of this by reading all poems through twice and then letting each group present its work, not identifying the poems. The students can then try to select which poem goes with which presentation. Contributor: Shirley Somers (Ideas taken from Models for Teaching, Croft Teacher's Service)

11. "Blown Mind Journal" - A notebook in which each student writes an imaginative piece during a 15 minute period of class - "No-holds-barred" type of assignment--poetry, narration, exposition, etc. "Any subject is legitimate; any structure is legitimate." Art work and music might be used as stimuli for this exercise. Since this is a short assignment without restrictions, it can be used as often as the teacher wants.

Contributor: Shirley Somers (Ideas taken from Models for Teaching)

12. Have students interact by playing the metaphor game--comparing classmates to animals, colors, furniture, food, etc. Let them explain their choices to each other. Contributor: Shirley Somers (Ideas taken from Models for Teaching)

13. Students sit in a circle with their backs to the center. One student begins a story (a fantasy) with a sentence that evokes identification and a visual image: "I am in the midst of a crowd of people--at least I think they're people." Let students add to the fantasy by free association of phrases or sentences. Let students return to their seats to elaborate in their journals on one or more aspects of the fantasy. Contributor: Shirley Somers (Ideas taken from Models for Teaching)

14. Have students bring a piece of "junk" from home to contribute to a "junk sculpture." Working in groups of 4 or 5, have the students create a sculpture of a man or woman from the junk they have collected. After completion of the art work, let students write in their journals a poem, story, or "character study" of the sculpture. (Man or woman is only a suggestion, of course.) Contributor: Shirley Somers (Ideas taken from Models for Teaching)

15. Assignment: Tell us something about yourself--what you are like, something about your family, something about your life, anything you want to tell us BUT you cannot use words.

    Expect looks of astonishment. Explain that this is an exercise in communication and creativity and that the contributions should be as unique and different as the students themselves. Place the results on display and take time to walk around and inspect each offering. Let the students "read" each other's to find how well the student has communicated his ideas. The originator may correct misinterpretations and add any things which may have been overlooked. Affective results include feelings of self-confidence and self-worth.
    Contributor: Sue Voyles (Idea from Media and Methods magazine)

16. View film A Dream of the Wild Horses. In groups of 4, each participant relates a recurring dream of his or one that he distinctly remembers. Group constructs one visual collage which portrays its dreams.
    Contributor: Larry Pridgen

17. "The Graffiti Game" - Tell the students to wear old clothes on test day. Divide the class into 5 or 6 groups. Put 4-foot sheets of butcher paper on the floor, on which you have written comments and questions with magic marker or crayon. (Write nonlinearly--here and there.)

    Rules: (1) Each group begins with an A (100 points). (2) The object of the game is to fill the sheet with as many pithy comments, questions, symbols and drawings as possible within the class period. (3) The action, reaction and interaction of intra-group communication may only take place via the written symbol; originality is encouraged. (4) No one may talk; ten points will be deducted from the team score per talking member. (5) Other points may be deducted for irrelevant material or blank areas indicative of lack of knowledge (not reading the material), lack of involvement or nonthinking. The graffiti sheets may be taped on the wall. The teacher may circulate and insert the word WHY? if it is needed with any comment.
    Contributor: Sue Voyles (Idea from Media and Methods magazine)

18. Divide into groups of 4-5. Each group starts with slip of paper containing nursery rhyme, poem, title of book, adage, etc. The group must act out the material without speaking at all. Variation: The group must jointly show facets of a particular emotion--without words. This would encourage creative thinking, flexible thinking, etc.

Contributor: Joan Blank (with help from Jerold Murdock)

19. Have the students write on a slip of paper a character from literature that they admire very much. Then collect the slips in a box, have each student draw one, and let each student explain what that character means to him. Let the writer then tell why he likes the character so much. All note the similarities and differences in the information.

Contributor: Peggy Stanton

20. Have students sit in a circle (on floor if possible) and place a pile of magazines in the middle. Each student will take the person to his left and find a picture of something that represents a likable trait or characteristic of that person. After five or ten minutes, each one will show his chosen picture and describe the trait.

Contributor: Ellen Trexler

21. "Decision Making" - Divide the class into five groups. Present each group with the following problem: You must evacuate the U. S. and settle on another planet which has the same physical characteristics as earth. Your group can only take three items. What would your group take and why? (You must be unanimous.)

Contributor: Mercedes J. Newsome

22. Have the class write down their main worries or problems. They do not have to sign names to the papers. Use their lists to compile a class list. Divide the class into 5 or 6 groups. Allow each group to draw lottery-fashion a problem case to analyze. Take the problems from your class list. First, the group members should consider the cause of the problem. Secondly, they should list various ways of coping with the problem. Each group will select a spokesman to present the opinions of the group to the class. Continue to use this exercise throughout the year. Encourage the class to turn in problems to you which the groups can try and solve. The most essential element of this activity is that the students do not have to identify their own problems and, therefore, may be more open.

Contributor: Ann Bryant

23. In preparation for writing about their problems, have the class consider outward signs of inner feelings. Through role playing (or writing) have students act out emotions. For example, what emotions do the following sentences suggest? Have students provide the situation.

    My hands were clammy.
    My knees were shaky.
    I bit my lip.
    My mother gasped.
    His face reddened.
    He clenched his fists.
    His eyes sparkled.
    My throat felt dry.
    Her voice trembled.
    He looked down.

I am sure you can add many to this list.

Contributor: Ann Bryant

24. Objectives: To break barriers in groups and get each member contributing; also to encourage creative thinking--This lesson combines encounter and problem-solving techniques.

Procedures: Divide the class into four groups of approximately 4 or 5 each. Give each group a collection of 5 articles.

Group 1: a safety pin, a cotton ball, one sheet of any color construction paper, a glass ash tray, and a wire whip (from kitchen)

Group 2: a bottle opener ("church key" type), a spool of any color thread, a Q-tip, a balloon, and a dinner plate or saucer

Group 3: a back scratcher, a crayon, a piece of any color cloth, a hand mirror, and a paper clip

Group 4: a large rubber band, a piece of newspaper, a pair of pliers, a glass cup, and a hand strainer (from kitchen)

Explain problem-solving technique. Then let each group get to work. Their problem is that they must come up with a "useful" 20th Century gadget that is made from all five of the items in the group. Suggested group work:

a. get idea for what each part could contribute to the whole--look at all possible uses of each item
b. narrow choices for each; then decide what whole object could be conceived
c. work together in getting pieces to fit while putting whole item together
d. have a coordinator from each group explain its item to the class while a demonstrator from each group is at work

Observations from group work:
What was necessary for group to begin?
What was necessary for group to continue working on problem?
What came from group work?
Did all members of group participate and contribute?
How did you feel as a member of group--satisfaction in product, sense of accomplishment, etc?
What was relation of each member of group while working on problem and item?

Contributor: Linda Stanley

Simulation Learning Activities

Simulation activities offer the teacher a unique tool to stimulate students. The inherent open-ended structure of such activities motivates the student to engage in divergent thinking processes in problem solution. One of the major values of this activity is its relationship to the real world. It takes the classroom to the outside world and brings the world into the classroom. Therefore, the student finds this relevant activity refreshing as well as motivating.

Included are several activities designed by the Institute participants. You and your students are encouraged to write your own after deciding on the concepts and objectives for your class.

1. Simulation Learning Activity: Developing a Newspaper Policy
Contributors: Peggy Stanton and Linda Stanley

Concept: Appreciation of the problems of beginning a newspaper
Objectives: (1) to begin to understand the viewpoint of various groups involved in the publishing of a paper, (2) to appreciate the difficulty that editors have in trying to be as objective and impartial as possible, (3) to learn how controversial issues can affect advertising, (4) to understand some of the frustrations and difficulties a reporter may have
Procedure: Divide the class into four groups: (1) editorial staff, (2) owners, (3) advertising and business managers, (4) stockholders. Each group develops a policy concerning content of stories and ads and viewpoint or objectivity of all material. Each group selects a representative who negotiates with other groups. After each group policy has been developed, the representative moves to each of the other groups, presenting his particular policy and negotiating as much as is necessary. Representatives meet after being in each group. If necessary, each returns to his own group for further negotiation. When an agreeable policy has been developed, a formal meeting of all groups will take place for the presentation of the policy. Any final disagreement will be resolved at this meeting.

2. Simulation Learning Activity: The Newspaper Game
Contributors: Joan Blank and Edith Constantine
Time: one week
Purposes: (1) to develop skills in creative thinking and in role playing, (2) to understand more clearly the importance of clarity of thought and of risk-taking in discussion, (3) to develop an awareness of problems involved in business transactions
Aim: To decide which employees of a newspaper should remain on the staff and which should be released--unless someone can come up with a workable idea to increase circulation
Players: Managerial: 1 major stockholder, 1 publisher, 1 managing editor, 1 editor, 1 business manager
Staff: 1 circulation manager, 1 news editor, 1 sports editor, 1 feature editor, 1 society editor, 1 copy editor, 6 reporters, 2 photographers, 2 ad men, 2 layout men, 4 secretaries, 1 receptionist
(Players may be adjusted to class size. All players pick random slips for parts.)
Situation: The only newspaper in the small city of Midtown is being forced by falling circulation to make drastic cutbacks in personnel or come up with a creative solution to the falling circulation. The job market is tight, so each employee must prove to the managerial staff that he is capable not only of holding his job, but that he can also do at least one other job better than the person who is now in that position.
Procedure: Each person must work on his presentation to the board of review, the managerial group, which must decide which employees are to stay, based on a policy which they have previously established.
First day: After introduction to the problem, about 30 minutes should be given for the preparation of arguments.

Second and Third days: The arguments are heard by the "board of review" or creative ideas for boosting circulation are given.

Fourth day: The board reviews the arguments.

Fifth day: The board is given findings and tells reasons for choices.

Evaluation: What influenced their decisions? What was learned from the simulation? What kinds of problem-solvings were involved?

3. Simulation Learning Activity: Selection of a State Capital
Contributor: Larry Pridgen

During the early years of North Carolina, the colonial legislature held its meetings in various towns, having no fixed town to call a capital. In 1766 New Bern was made the colonial capital, but this only lasted a dozen years; the legislature then began its wanderings anew. In 1788 the Hillsborough Convention, realizing the need for a permanent capital, selected Wake County. The vote was close, however, as many delegates favored Fayetteville or other towns. The Capitol building in Raleigh burned in 1831, and Fayetteville again made a strenuous effort to become the capital. However, the Capitol was rebuilt in Raleigh.

The following is a simulation activity which attempts to recapture some of the rivalry between towns which was present in the early days of North Carolina as those towns strove to become capital. At the same time, the activity tries to teach location of some present day North Carolina towns and cities by setting the activity in 1973.

As a result of this activity, students will be able to: (1) locate the towns and cities used in the game on a blank North Carolina map, (2) estimate distances on a map using a scale of miles, (3) summarize the process just completed, concentrating on the elements of narrowing the field and compromise, (4) explain their position on the issue of how closely a legislator should follow the will of his constituents and how much he should rely on his own conscience.

Materials for this activity include one North Carolina map for each student. This should be a road map showing major cities and including a scale of miles. This type map is available in the front of Hugh T. Lefler's North Carolina textbook. The activity also requires slips of paper with the names of North Carolina towns and cities -- one slip for each student. A list of twenty-four is suggested below, but these may be changed: Elizabeth City, New Bern, Kinston, Wilmington, Laurinburg, Rockingham, Fayetteville, Greenville, Rocky Mount, Goldsboro, Durham, Chapel Hill, Burlington, Greensboro, High Point, Lexington, Salisbury, Charlotte, Statesville, Hickory, Asheville, Shelby, Lumberton, Sanford.

Pass out the slips of paper and say to the students: You have been reading about the early days of North Carolina and vying of various towns to be capital. Let's see what would happen if a similar situation arose today. Pretend that Raleigh is no longer the capital and a new one must be chosen. You are legislators charged with selection of a new capital and the town from which you come is, of course, interested in being the capital (slips of paper represent hometowns). Failing that, your town would certainly want to be near the capital. As a matter of fact, if the new capital is located more than sixty miles from your city, the chances of your re-election are very slim.

This game calls for cooperation among groups of legislators in trying to get the capital located near them. You may bargain with your miles as if they were points. For example, if a group of legislators is trying to locate the capital in Durham, the legislator in Chapel Hill is only twelve miles away and has forty-eight points (60 -12 = 48) to deal with. Thus, the legislator from Goldsboro (65 miles from Durham) might be persuaded to join the Durham movement if the legislator from Chapel Hill took five of his points for him. Therefore, if Durham eventually became the capital and Chapel Hill and Goldsboro made no further deals, the final score for Chapel Hill would be 17 and for Goldsboro, 60 -- both would be re-elected.

After explaining the activity, allow time for some figuring of distances and planning of prospective alliances. Make sure that the scale of miles is used accurately. Then allow the initial bargaining session to begin. Following it, hold a meeting in which nominations for state capital are entertained. Vote on those nominations; and if no town gets a majority, narrow the field to the top two vote-getters and allow a secondary stage of bargaining. Make sure that the students understand that in many cases this new stage will necessitate more figuring of distances and new agreements. Finally, hold a vote to determine who the re-elected legislators will be.

In addition to the map knowledge acquired, some useful discussions should come out of this activity. For example:

1. What conditions would make a city a good capital?
2. What are the advantages and disadvantages to having one set capital?
3. What are the pros and cons to Raleigh as the capital?
4. What if a legislator, as an individual, thinks a distant city would make a better capital for the state than his own city? (Here discussion could shift to the general question of how much the legislator should obey his conscience and how much the will of his people. Also, what are the consequences of each choice?)
5. What role does compromise play in the legislative process?

4. Simulation Learning Activity: Transportation
Contributors: Elinor Workman and Glenn Parrott
Objectives: This activity is intended to create an awareness in students of the following points and cause them to explore avenues of solutions for the problems arising from these conditions:
    1. an increase in vehicular traffic and the congestion problems created by this
    2. the increasing need for more, better, and safer roads and highways
    3. the cost of building and maintaining these roads, signs, and traffic control devices
    4. the growing need for an adequate transportation system.

Situation: In a city of 100,000 people, three new factories have recently been built. The present factory shift hours for all three plants are from 8 a.m. to 5 p.m. Most businesses and offices in the downtown business district open at 8:30 or 9:00 a.m. and close at either 5:00 or 5:30 p.m. The residential population of the city is

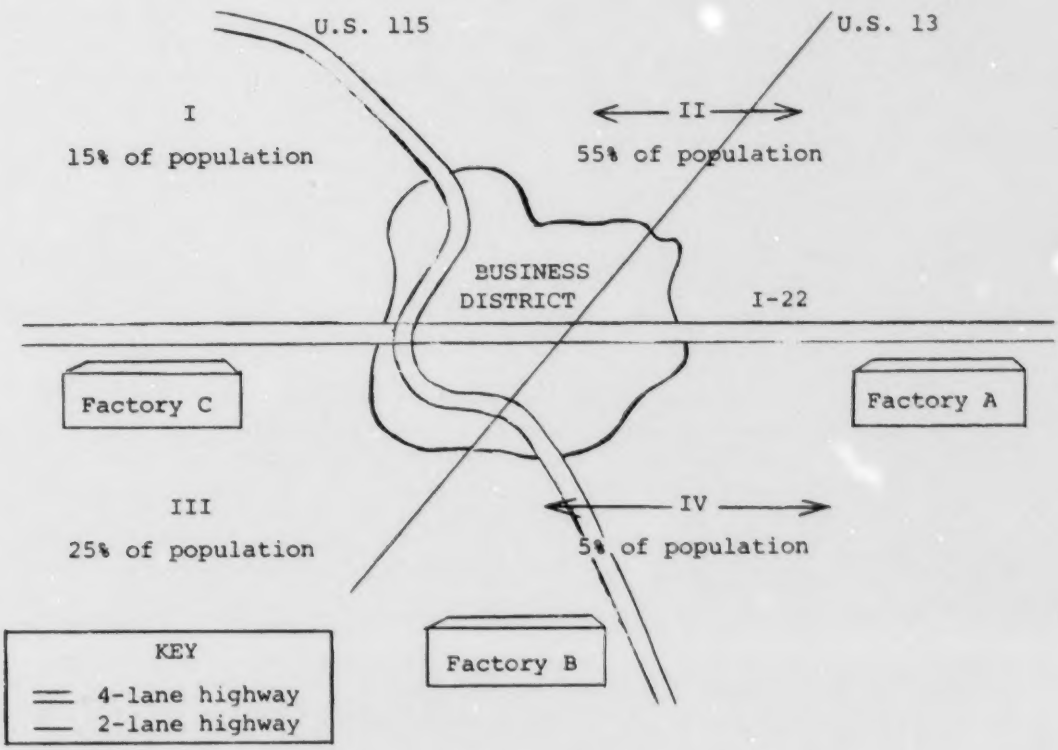
unevenly distributed with the following percentages living in the different quadrants: 15 percent living in area I, bounded by I-22 on the south and U. S. 115 on the east; 55 percent living in area II, bounded by I-22 on the south and U. S. 115 on the west; 25 percent living in area III, bounded by I-22 on the north and U. S. 13 on the east; 5 percent living in area IV, bounded by I-22 on the north and U. S. 13 on the west.

Factory A has 3,000 employees who live in the following areas: 1,500 live in II, 400 live in I, 700 live in III, 100 live in IV, 300 commute from outlying districts.

Factory B has 5,000 employees who live in the following areas: 3,000 live in II, 900 live in I, 500 live in III, 200 live in IV, 400 commute from outlying districts.

Factory C has 1,000 employees who live in the following areas: 700 live in II, 200 live in III, 100 live in I.

Highways I-22 and U. S. 115 have a maximum capacity of 2,500 cars per hour in each direction and U. S. 13 has a maximum capacity of 750 cars per hour in each direction. With the opening of the factories, serious traffic tie-ups have occurred since there are only the three major roads serving the city. In some places, traffic has been almost at a standstill between the hours of 5:00 p.m. and 6:00 p.m., especially on U. S. 13. The Highway Department has a budget of only six million dollars to build new roads in and around the city. It costs approximately $700,000 to build one mile of a four-lane road, $500,000 to build one mile of a two-lane road, and $300,000 to widen a two-lane road to a four-lane road. (This includes the cost of acquiring land.)



Procedure: Each student group (preferably 5-7 in number) should have a copy of the map and the situation. Each group should try to figure out the best solution to the problem, using the information and amount of money given.
Evaluation: Each group reports on its solution. These are then discussed in class and evaluated by the group as a whole. This should lead into a discussion of actual problems and their influence upon everyday life.
Follow-up: As individual or small group projects, the home situation might be examined. Field trips could be taken to the Police Department or the Office of the Planning and Development Board. Outside speakers might be invited who are experts in the fields of planning, highway construction, financing of public works projects, and the like. Some students might want to research the ways that some large cities are coping with their traffic problems.

5. Simulation Learning Activity: Desegregation
Contributor: Elizabeth Groff

History of Ashgreenton Ashgreenton, a city of 100,000 in the Appalachian region of a Southern state, has a long history of racial prejudice and unrest. White settlers drove the Indians into the hills, then brought in Negro slaves. The three races have traditionally attended separate schools. The White schools are acceptably equipped and staffed, but the Black and Indian schools are inferior.

A Federal judge has ruled that Ashgreenton has one month to desegregate its schools. There is little industry in the county; several factories have already cut production due to the energy crisis, and unemployment is spreading. No money is available to build new schools. The money ($100,000) could be raised quickly, but more funds would have to come from taxes and be voted on by the community.

Buses are scarce, but State aid might provide a few more. The mountain roads are treacherous; some are unpaved, while others are often blocked by rockslides.

Housing patterns are established, and citizens refuse to live in a neighborhood populated by different racial groups. Outside agitators have aroused racial militance in each group. The School Board is trying to devise a desegregation plan acceptable to all, while each racial group is looking out for its own best interests.
Purpose: to expose students to the problems involved in the desegregation of schools when the housing is segregated
Objectives:

1. to let students play the role of a member of a different race and see the situation from another perspective
2. to explore the various considerations involved in formulating a desegregation plan
3. to discover the necessity for compromise
4. to search for alternatives
5. to find a way to levy taxes to support the schools

Procedures:

1. Have students number off by 5's to divide into groups. 1's - Indians, 2's - Whites, 3's - Blacks, 4's - School Board members, 5's - judges
2. Let students form groups, establish headquarters, and choose leaders and secretaries.

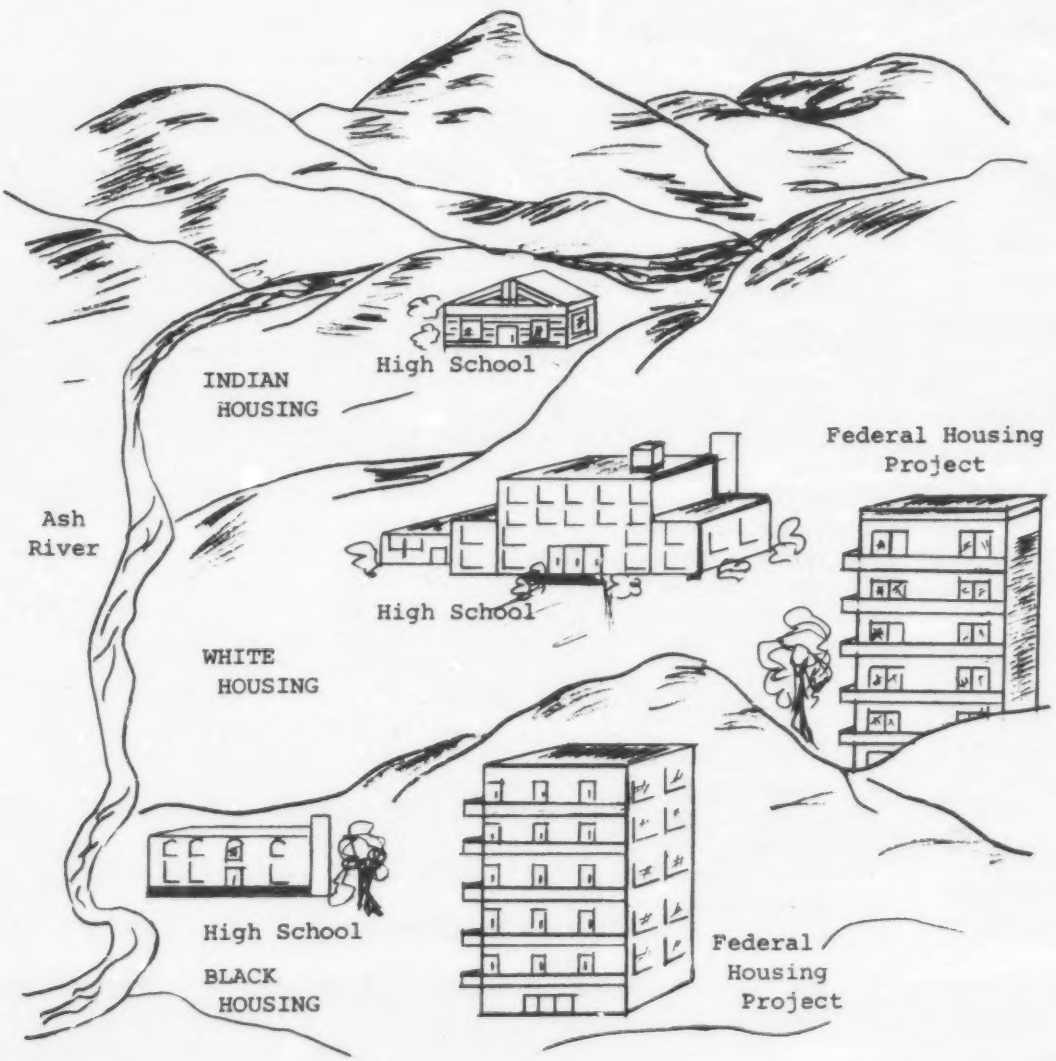
3. The time required for activity is as many days as necessary for specified length of time each day.
4. judging
* Optional: When groups are near negotiating an acceptable plan, have one of the high schools be destroyed by arson.

Order of Play:

1. daily group meetings - 5 minutes
2. negotiations among leaders - 5 minutes
3. open School Board meetings - 10 minutes

(During 2 and 3 judges will be researching and establishing Federal guidelines.)

MAP OF ASHGREENTON



6. Simulation Learning Activity: Punctuation Poker
Contributor: Sue Voyles
Materials: 3" x 5" index cards, cut in half, felt tip pens

Using one half of an index card as the playing card, make up the deck as follows, placing the mark of punctuation in the center of the card and the point value in the lower right corner:

No. of Cards		Point Value	No. of Cards		Point Value
5	Apostrophe	1	5	Colon	2
5	Comma	1	5	Exclamation point	1
2	Italics	3	5	Period	1
3	Hyphen	2	5	Double quotation marks	2
5	Question mark	1	5	Semicolon	2
2	Single quotation marks	3	1	Bracket	3
2	Parenthesis	2			
2	. . .	3			

Rules: Each player will receive five (5) cards from the dealer. He may elect to play with these cards or draw up to three (3) other cards from the dealer. He must discard the number he requests before any additional cards are dealt.

Each player must construct a sentence using the punctuation marks he holds in his hand. If he has no end mark, he must fold. The sentence must meet the requirements for standard English usage. If a sentence is not acceptable, it must be withdrawn. The remaining sentences are judged on the point value of each mark. Any marks that have not been used must double in point value and be subtracted from the total point value of the sentence. The player with the highest number of points wins the hand and his points are recorded for the game total. The first player to reach 30 points wins.

Note: Five or six decks may be necessary in order to allow the entire class to participate. So that the decks may be easily sorted, use various colors of index cards or old Christmas seals or stickers of some sort to identify each deck. Stores will give you a roll of price stickers with their name on it if you don't object to being a beggar. Don't use very wide magic markers because they will bleed through and show what is in a hand. You may need to identify the comma and apostrophe since they look alike outside of a sentence.

7. Simulation Learning Activity: Atomic Bingo (9th grade physical science)
Contributor: Ellen Trexler
Concepts to be developed:

1. Each element can be identified by a name, a number, and a symbol.
2. Each element is related to a group of elements in a quantum number.
3. The symbol for each element is either one capital letter or one capital letter and a small letter.
4. The periodic chart is an arrangement of all the elements in their related groups.

Objectives to be accomplished:

1. to write the name of some of the elements with their number and symbol
2. to write the range of atomic members in each quantum number
3. to be able to find all elements on a period chart by their number, symbol and quantum number
4. to be able to respond orally to the name of an element by stating its symbol and number

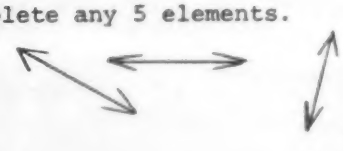
Evaluation of concepts and objectives after simulation activity has taken place:

1. Have students recall orally either the symbol or name of an element when given an atomic number while using a periodic chart only.
2. Have students to write as many elements' names, numbers and symbols as they can in ten minutes without using any aids.
3. After several times of using simulation activity, have student organize elements either by symbol, or atomic number, or both into the seven quanta numbers.

Procedure: Materials -- 2 periodic charts (Cut one in many squares, keeping all atomic data for each element in the square.), 40 Atomic Bingo Cards (Make each chart with a different arrangement of numbers; let students fill in letters and atomic number.), 800 small squares cut from construction paper to place on Bingo Cards
Number of players: 1 number "caller-outer;" 1 number "recorder;" 1 to 40 participants
Rules of activity: Each participant receives one Bingo Card and 20 small paper squares (of construction paper). All number squares cut from the periodic chart are placed in a box or small container to be mixed up. The number "caller-outer" picks up one number at a time from the container and reads aloud the quantum number and also the name of the element on the chart square. (i.e. Quantum No. 3 - Sodium) One of the participants now must give correctly the Atomic number and the symbol. If the number and symbol are given correctly, everyone that has that symbol and number can cover it with a construction square. If correct information has been given, square is given to recorder to place on second periodic chart for reference. However, if the number or symbol is not given correctly, the "caller-outer" puts the square back into the box after giving the correct answer so that it may be called out again. The activity continues until one participant has bingo by having 5 squares covered in a line vertically, horizontally, or diagonally.

This sample Atomic Bingo card is an example for use on 8 1/2" x 11" paper.

Complete any 5 elements.



A T O M I C B I N G O				
Quanta 1,2,3	Quantum 4	Quantum 5	Quantum 6	Quantum 7

8. Simulation Learning Activity: Prelude to War

Description: This activity is to be used during a unit on the period before the Civil War. A number of roles are written on cards, one role per card. (See a list of suggested roles given below.) Each student is given a card and told to play his role appropriately.

"Crisis" cards are used to set the situation. (See below for examples.) A crisis card is drawn and the role players are directed to prepare themselves to present their positions on the crisis for the next day's class period. They may present their arguments by making a speech, writing an editorial, drawing a cartoon, etc.

After the presentations, time is allotted for persuading the uncommitted--those who do not have roles or whose roles in this particular crisis are not clear--to take a particular position. A secret ballot or poll is taken and the results are given the next day. If necessary or appropriate, the teacher or a student reviews what actually happened. Roles are changed frequently. New roles and crisis cards may be added at any time. One student must play the role of the slave in each crisis. However, he may not present his views or vote in any poll.

Crises:

1. The time is the spring of 1787. Some of the delegates at the Constitutional Convention want to end the slave trade, and most Southern delegates want to count the slaves in figuring a state's representation in the new Congress. Conflict must be avoided if the Constitution is to be ratified.
2. It is the summer of 1819. Missouri is seeking admission to the Union as a slave state. There are an equal number of free states and slave states. Thus, the Senate is equally divided. Admission of Missouri will upset this balance. To complicate matters, many Northern congressmen are arguing strongly that Congress can and should regulate slavery in the territories. Southern leaders are opposed to this view.
3. South Carolinians, in a special convention in 1832, have declared a tariff act "null, void, and no law." They have also threatened to secede if the national government acts to enforce the tariff laws in South Carolina. John C. Calhoun, the Vice President, leads the South Carolinians. Andrew Jackson is President. The Virginia Resolutions, the Kentucky Resolutions, and the record of the Hartford Convention furnish background for this controversy. The cabinet is meeting with the President to decide what course to follow.
4. The Mexican War has added a large territory to the United States. In 1849, California applies for admission to the Union as a free state. This would upset the political balance in favor of the North. There are also disputes about disposition of the remainder of the New Mexico territory, the slave trade in the District of Columbia, and Southern complaints about the lack of a strong fugitive slave law. Feelings are running high.
5. Stephen Douglas, a senator from Illinois, has just introduced a bill in Congress which would create the territories of Kansas and Nebraska and permit the issue of slavery to be decided in them on the basis of popular sovereignty--in

violation of the Missouri Compromise. Many Northerners are enraged by this proposal. Meanwhile, Kansas is bleeding.

6. The time is 1856. Dred Scott, a slave, has sued for his freedom on the grounds that his former master took him to territories where slavery was illegal. The Supreme Court must decide the case. There are those who question Scott's right to sue. Lower courts have ruled that Scott is free.
7. You are citizens of Moore County, North Carolina (or your local area), in December, 1860. Other Southern states are planning to secede from the Union. A call has been made for a convention to repeal North Carolina's ratification of the Constitution. Moore County's citizens must choose a delegate from two men who have opposing opinions.
   Roles: Crisis 1: delegates to the convention from each state, farmers, newspaper owners, slave, Southern planter, compromisers
   Crisis 2: senators and representatives from different states, newspapermen, farmers, planters, slave, abolitionists, businessmen from each section, Henry Clay
   Crisis 3: Jackson, Calhoun, Henry Clay, Cabinet members
   Crisis 4: same as in #2 and some territorial representatives from California or the New Mexico Territory
   Students could play Henry Clay, Daniel Webster, Seward.
   Crisis 5: In addition to the roles listed in #3, students could play Stephen Douglas and Abraham Lincoln.
   Crisis 6: lawyers for both sides, justices of the Supreme Court, Dred Scott
   Crisis 7: citizens of Moore County, slaveowners, ministers, nonslaveowners

9. Simulation Learning Activity: Future Cities
   Contributor: Paul White
   Organization: Students are divided into groups of 5. Each student is assigned one of these roles:
   1. in charge of schools and religious activities
   2. in charge of governmental agencies
   3. in charge of large industries
   4. in charge of small businesses and industries
   5. in charge of highway construction, utilities, etc.

   Problem: Each group is to design a city to accommodate 100,000 residents, using a maximum of 25 square miles of area. Each student is to assume his role to insure that the group of people he represents are not shortchanged in the deal. The city must include all housing for the 100,000 residents within the city limits.
   Method: This project should run for approximately 6 weeks with approximately 30 minutes of class time a week devoted to the project itself. At the end of the project, each group should be given time to present their model of their "Future City" with class discussion as to good and bad features incorporated into their model.
   Purpose: It is hoped that students will see the need for cooperation between the various forces in a community so that the goals of the community can be met. Also, the project should make use of geometric design, organizational skills, and communication skills.

10. Simulation Learning Activity: Genesis
Contributor: Jerold Murdock
Purpose: to encourage fluent, flexible thinking and elaboration, as well as risk-taking and imagination by use of the following strategies: #2, #5, #15, and #16 (Williams' Model)
Procedure: Present to the class a map of an area which is not real. The class is then divided into 4 groups: (1) climate and geography, (2) plants, (3) animals, (4) human history.

With no additional information given, each group is allowed a certain time for discussion within their group. They are to take their topic and decide how it relates to the island. For example, group (2) will decide the types of plants and where each type will be located. Each group then presents its decisions to the entire class.

Then comes the period of interaction. For example, if the first group, climate and geography, has placed the country at about the same latitude as the U.S.A., and the second group has made the plant life jungle-like, then some adjustments must be made. If one group makes a change, how will this new information affect the other three groups?

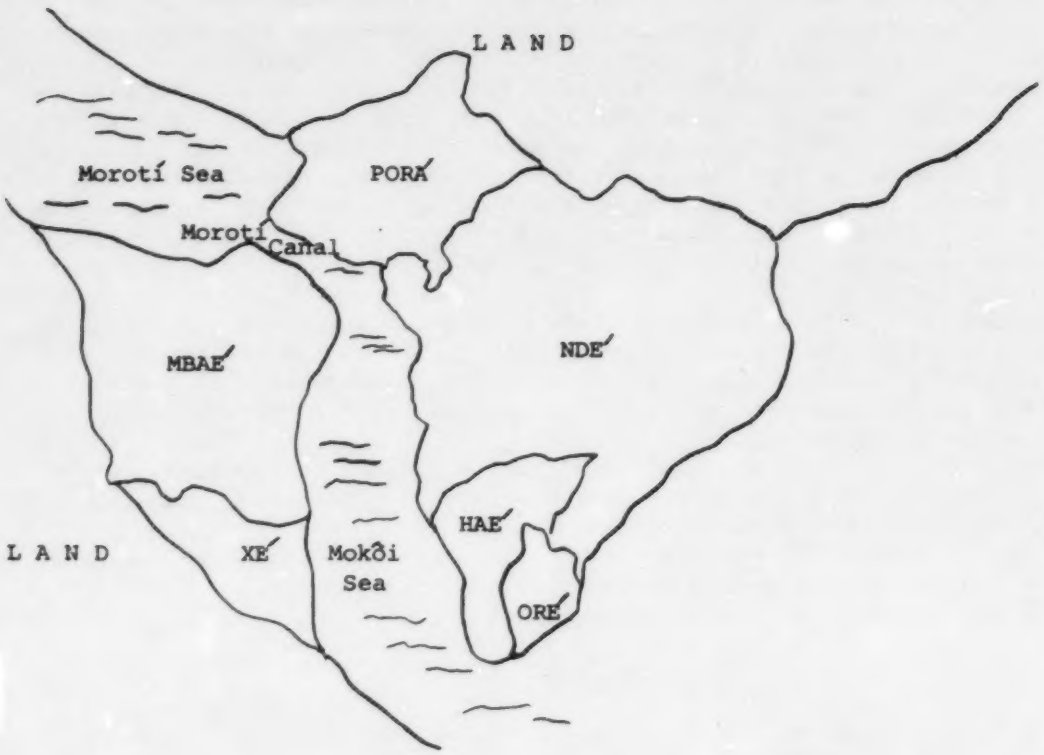
This simulation learning activity should be used toward the end of the year when all of the above facets of social studies have been studied. This is a way of telling the students that these areas of study are not independent areas, but rather are interwoven so that any change in any one of them will reflect in the other three. This should be used as an activity which will tie all these areas together.

11. Simulation Learning Activity: Survival
Contributor: Mary Sue Gomez
Situation: Six neighboring countries' economy depends on tourist or trade (export of oil/agriculture produce and import of manufactured goods, etc.) that enters and leaves by way of the Moroti Canal. The Moroti Canal is their lifeline. Mbae is the owner of the Moroti Canal and decides to close it. Hae is having a political civil war. Now that Mbae has closed the Moroti Canal, each country must prepare strategies of survival.
Procedures: Form 6 groups. Each group is designated as a different country. Within each country (group) decide who will be the leader, his name and title, and decide upon necessary advisors and consultants and their respective titles or positions.

Make a name tag for each country so as to easily identify them. If desired, make name tag for each person. Everybody should participate and should be necessary even if he is a cabinet member's assistant or something of that nature.

In a given amount of time (15 minutes more or less), each country makes its plans with the use of the map and chart data. During another block of time, negotiators and leaders make or attempt to make the previously planned negotiations by visiting and talking with the leaders and/or negotiators of other countries. In another given time, a united conference can be held and final decisions of survival plans and/or treaties can be made known to all 6 countries.

MAP FOR "SURVIVAL"



COUNTRY	MILITARY FORCES	NATIONAL MORALE	NATIONAL STANDARD OF LIVING
XE	4	4	5
NDE	3	3	4
HAE	3	2	3
ORE	3	4	2
MBAE	2	5	2
PORA	2	1	2

S C A L E
1 = Poor
2 = Below Average
3 = Average
4 = Above Average
5 = Superior

12. Simulation Learning Activity: Eco
Contributor: Mercedes J. Newsome
Overview: (1) Students are made aware of some of the economic problems in their communities. (2) Students develop an awareness of the importance of "consensus" and "compromise." (3) Students share some of their assumptions on the functions as well as goals of big business. (4) Students learn to fabricate. (5) It is "20th Century."
Problem: The cities of Deria, Rope, and Mino are about to experience an economic crisis because each city will lose its major industry in six months. Three industrial companies plan to relocate in the South. All three would like to locate in the same city. Divide the class into 4 groups. One group must have only 3 students who will represent the three industrial companies that plan to move South. The other groups will represent the cities of Deria, Rope and Mino. (Students may draw for cities.)
Situation I: Each city will spend 30 minutes preparing a brief to be presented to the industrial group orally. While the cities are preparing their oral briefs, the industrial companies will review the written material they have about each city. The industrial group will make a tentative choice.
Situation II: (20 minutes) Each city will send a representative to the industrial group to make a five-minute presentation. (question and answer period of 5 minutes)
Situation III: (5 minutes) Industrial companies will vote and they will give an oral report on the result of the voting.
Situation IV: class discussion

CHART FOR "ECO"

Place this material on the board or use the overhead projector so all may see.

Do not fill in names until after students have been assigned cities.

W - White B - Black

All cities have natural seaports and miles of virgin forest.

Scale: 1 = inferior, 2 = below average, 3 = average, 4 = above average, 5 = superior

City	Housing	(% of the Total White Population and % of the Total Black Population) Welfare	Population	Government	Transportation	Education	Other Recreation
Deria	3	50% W 50% B	70% W 30% B	3	4	3	2
Rope	4	20% W 10% B	60% W 40% B	3	3	4	4
Mino	2	40% W 60% B	55% W 45% B	3	5	2	2

Lesson Plans

The Institute teachers designed their lesson plans based on their own content areas and incorporated many of the theories and techniques that were studied. It was decided by the group that highly structured daily lesson plans might prove too confining for creative individualized instruction. Therefore, most of these lesson plans are unit plans and the objectives are written in the vein of informational rather than planning behavioral objectives. The concepts usually are broad aims and often are written in the affective domain.

Teachers probably should not try to use a plan intact; these are designed much more for use as a springboard. Hopefully, teachers will see how simulation, encounter lessons, Williams' Model strategies, and other theories can help build lesson plans.

This first plan is for teaching a unit on the newspaper at junior high school level. Adaptations would make the unit appropriate at other levels.

1. Newspaper Unit

Contributors: Edie Constantine and Joan Blank

Aim: to instill a better understanding of journalism by means of actual participation in the creation of individual newspapers

Purposes:

1. to develop an understanding of journalistic patterns and procedures
2. to encourage the critical reading of newspapers
3. to give the opportunity for the development of original, flexible, and fluent thinking in the production of creative and factual items for a newspaper
4. to augment previously learned library skills
5. to encourage risk taking and to challenge intellectual curiosity through the problems involved in producing a complete newspaper

Behavioral Objectives for Newspaper Unit:

1. Given major newspaper articles and items, students would be expected to tell where those articles might logically appear in a typical newspaper. The articles will include major news stories, sports reports, advertisements, social announcements, editorials, and feature stories.
2. Given editorial articles from selected national newspapers studied in class, students will be expected to identify the kind of newspaper in which the articles appeared (i.e. liberal, conservative, etc.).
3. Given paragraphs excerpted from newspapers and novels, students will be expected to write a paper which differentiates between the writing style of the novelist and the journalist and which explains their choice. Students must be able to correctly identify a minimum of 4 out of 6 selections in two hours.
4. Given 8 paragraphs consisting of 2 or 3 sentences each, students will be able to condense and abbreviate the information so that it could be used as a Help Wanted or Jobs Wanted item, or an item in the classified ads.

The students will also be able to rewrite these ads in such a way as to appeal to a specific socio-economic group or age level.

5. Given specific examples of newspapers, comic strips, features, and political cartoons, students will be able to write at least a two-page paper dealing with the various aspects of humor as a propaganda device.
6. Given a list of unfamiliar facts, the students will be able to write a news item, a feature, a social column, or a sports article that conforms to journalistic standards.
7. Given the number and length of items, articles, photographs, and fillers, students will be able to design a layout that includes masthead design, headlines, and specified column width and that conforms to the standards set up by the various newspapers being studied.
8. Given familiar reference materials, students will be expected to extrapolate relevant materials and information which will enable them to produce their own newspapers.

Newspaper Unit and Williams' Model -- Strategies based on Williams' Model: 1 - Paradoxes, 2 - Attributes, 3 - Analogies, 4 - Discrepancies, 5 - Provocative Questions, 6 - Examples of Change, 7 - Examples of Habit, 8 - Organized Random Search, 9 - Skills of Search, 10 - Tolerance for Ambiguity, 11 - Intuitive Expression, 12 - Adjustment to Development, 13 - Study Creative People and Process, 14 - Evaluate Situations, 15 - Creative Reading Skill, 16 - Creative Listening Skill, 17 - Creative Writing Skill, 18 - Visualization Skill

Behavioral Objective	Strategy Numbers	Behaviors
1. Determine where articles appear in paper.	8, 9, 14, 15	Cognitive: Flexible Thinking, Affective: Curiosity, Risk Taking, Complexity, Imagination
2. Determine editorial philosophy of newspaper from items.	2, 9, 14, 15	Cognitive: Flexible Thinking, Affective: Risk Taking, Complexity
3. Write original paper discussing differences in novel and journalistic writing styles.	10, 13, 14, 15, 17	Cognitive: Fluent Thinking, Original Thinking, Elaborative Thinking, Affective: Curiosity, Risk Taking, Complexity, Imagination
4. Write original ads for specific groups or age levels.	2, 5, 7, 8, 11, 14, 15, 17	Cognitive: Fluent Thinking, Flexible Thinking, Original Thinking, Elaborative Thinking Affective: Curiosity, Complexity, Imagination
5. Write original paper on kinds of and uses of humor in journalism	1, 2, 3, 5, 6, 7, 8, 9, 10, 13, 14, 15, 17, 18	Cognitive: Fluent Thinking, Flexible Thinking, Original Thinking, Elaborative Thinking, Affective: Curiosity, Risk Taking, Complexity, Imagination

(continued)

Behavioral Objective	Strategy Numbers	Behaviors
6. Write an item for a newspaper.	1, 2, 5, 6, 14, 17	Cognitive: Fluent Thinking, Flexible Thinking, Original Thinking, Elaborative Thinking Affective: Curiosity, Complexity, Imagination
7. Do layout of a newspaper.	13, 14, 15	Cognitive: Original Thinking, Affective: Curiosity, Risk Taking, Complexity, Imagination
8. Produce paper.	all strategies	all behaviors

Newspaper Unit and Guilford Model:

Cognition -- reading a newspaper
Memory -- basic rules of journalistic writing
Convergent thinking -- discussion of types of items found in newspapers, skills involved in writing for newspapers
Divergent thinking -- original papers on style, humor, etc.
Evaluation -- sifting of material for the best that is available for use in the production of an original newspaper

Major Classroom Activity: Students will design, write, edit, and produce their own newspaper. They may select any period and geographical location for their paper. They will study that period/place carefully so that their paper will accurately reflect the thought, language style, fads, and cultural events of the time.

Guidelines:

1. Give the paper a title, date, location, and price.
2. Write major news articles.
3. Write an editorial column or page.
4. Write book reviews, play reviews, or other reviews of a cultural nature which would be appropriate to the time and place chosen.
5. Design advertisements that appeal to all age groups and socio-economic levels.
6. Design drawings, pictures, puzzles, cartoons, polls for paper.
7. Write obituaries.
8. Write sports, social, and feature articles.

Explanation of Evaluation:

1. Students will be required to submit sample articles almost every week. These articles will be graded on content, creativity, and form.
2. Students will be given a test at the conclusion of this unit. The test will contain some objective questions, but emphasis will be placed on essay questions relating to the broad concepts studied in class.
3. Students will be given a subjective evaluation which will be based on classroom participation.
4. Students will submit their newspapers for evaluation. Evaluation will be based on creativity, organization, content, and observance of journalistic procedure.

Additional information concerning evaluation of newspapers: Students will be allowed to do contract work for their papers. The categories of contracts will be A-Honors, A, B, and C. In order for a student to qualify for A-Honors, he must submit a well-organized paper that is at least 3 pages long. The paper must include at least two of each of the following kinds of articles: sports, social, feature, editorial, syndicated columns, news, and reviews (of books, plays, etc.). It must also include one political cartoon, comic strips, advertisements, fillers, a masthead, obituaries, and a title. The paper must accurately and artistically depict any historical period. Students who select the A contract will submit a paper that has all items for the A-Honors contract; however, they will exclude comic strips, ads, fillers, and obituaries. Students who choose the B contract will submit a paper which is like the A contract paper; however, they must write a paper which includes only one of each of the kinds of articles, and their paper must be 2 pages long. Students who select the C contract will submit one of each of the kinds of articles and an editorial cartoon. They will not be required to organize these articles into a paper, but they must write all articles for the same period of history.

Brief Accounts of Weekly Activities:

Week I
1. Introduce the unit by asking students, "What is a newspaper?" and record their comments on the board.
2. Distribute a classroom set of the local paper and give students time to examine it. Study the layout of the paper and introduce such terms as masthead, by-line, leader, headlines, dateline, wire services, local news stories, and syndicated columns, etc.
3. Have a brief weekly evaluation.

Week II
1. Students will concentrate on the editorial page this week. They will examine 7 or 8 national newspapers (4 students per paper) and determine the editorial policy of each. (i.e. liberal, conservative)
2. The editor of the local newspaper will be invited to discuss his paper's editorial policy.
3. Students will be evaluated by being asked to submit two editorials which are written on the same subject. One editorial should reflect conservative attitudes, and one should reflect liberal thinking.

Week III
1. The sports section of the paper will be studied this week. Students, especially the boys, will be asked to explain some of the terminology which is incorporated in sports articles.
2. The sports editor of the local paper will be invited to talk to the class about the sports section of the paper.
3. Students will be evaluated on the sports article they write.

Week IV
1. The features and social section of the paper will be studied.
2. The local feature editor, social editor, and photographer will be invited to discuss their particular kind of work.

3. Students will submit one feature story and one social article for evaluation.

Week V
1. The first few pages of the paper will be studied and students will note the kind of news stories which appear there.
2. The news editor of the local paper will be asked to speak to the class about his work.
3. Students will submit one news article for evaluation.

Week VI
1. Students will tour the local newspaper office and have an opportunity to see a newspaper being created. The students will use the remainder of the week to complete their own newspapers, arrange layouts, and prepare for final unit evaluation.

Some of the following papers will be studied in class: Chicago Tribune, Washington Post, St. Louis Post Dispatch, New York Times, Miami Herald, Boston Globe, Christian Science Monitor, Atlanta Constitution, San Francisco Chronicle, Wall Street Journal, Kansas City Star, Baltimore Sun, The National Enquirer.

Source materials for the student newspaper include the following: Information Please Almanac, Guiness Book of World Records, Guiness Book of Sports, Ripley's Believe It or Not, Comix, Illustrators 1900-1960, Elements of Style, Only Yesterday.

Other books in the following subject areas: art, music, drama, science, transportation, English lineage, medicine, wars, amusements, social customs, inventions, discoveries, clubs and organizations, exploration, religion, education, fashions, industry, government.

The following lesson plan gives enough of the unit for a teacher to use as an example for daily lesson plans and gives a thorough, overall look at the strategies to be used.

2. Algebra II Unit

Contributor: Paul White

Concepts to be learned in Algebra II:

1. that algebra is a tool used in business, science, engineering, etc.
2. that algebra is a theory to be studied for its own sake
3. that many results of algebraic manipulation are a means to problem solving
4. that graphing is a visual tool for comparing, contrasting, and for problem solving
5. that mathematics is a vast field of endeavor, and understanding of some of its concepts does not mean mastery of the field
6. that geometry and algebra are related areas of study and that the blending of these subject areas produce other areas of mathematics
7. that the educational sequence in mathematics closely parallels the historical development of mathematics
8. that mathematics is man-made (It will be forever changing and expanding.)
9. that algebra is a language (To be fluent in algebra means to know the vocabulary and skills of communication of algebra.)

Unit I. Mathematical Statements and Proofs

Resources: (1) textbooks (2) encounter lesson on proofs (3) student-designed bulletin boards

Objectives: Each student should be able to:

1. identify a mathematical statement from a list of statements
2. use mathematical connectors to compose compound mathematical statements
3. interchange the logic symbols for their word meanings
4. negate a compound statement
5. use set notation and operations
6. distinguish mathematical quantifiers
7. write a converse, an inverse, and a contrapositive when given a conditional
8. correlate objectives (1-7) to gain insight into the methods of geometric proof which he has previously studied
9. intuitively understand the axioms for the real numbers
10. supply the reasons in previously designed algebraic proofs
11. verbally explain proofs of theorems as given in the text
12. construct simple, algebraic proofs
13. find truth values for simple and compound mathematical statements

ANALYSIS OF OBJECTIVES USING WILLIAMS' MODEL

Objective	Related Concepts	Strategies To Be Used*	Pupil Behavior	
			Cognitive	Affective
1	2,6,9	2,14	Fluent Thinking	Curiosity, Risk Taking
2	1,2,6,9	2	Fluent Thinking	Curiosity
3	1.9	2,14	Fluent Thinking	Curiosity
4	2,9	2,14	Fluent Thinking	Curiosity, Complexity
5	2,9	2,14	Fluent Thinking	Curiosity
6	1,2,6,9	2,14	Fluent Thinking	Curiosity, Risk Taking
7	1,2,6,9	2,14	Fluent Thinking	Curiosity
8	6	2,3,7,14	Fluent, Flexible, Elaborative Thinking	Curiosity, Complexity
9	2,9	11	Fluent Thinking	Curiosity
10	2,6	2,14	Fluent Thinking	Curiosity, Risk Taking Complexity
11	2,6,9	2,3	Fluent Thinking	Curiosity, Risk Taking, Complexity
12	2,6	8,14	Fluent, Flexible, Original Thinking	Curiosity, Risk Taking, Complexity
13	2,9	2,3,14	Fluent Thinking	Curiosity, Complexity

*Key: 2 - Attributes, 3 - Analogies, 7 - Examples of Habit, 8 - Original Random Search, 11 - Intuitive Expression, 14 - Evaluate Situations

Examples of Lessons:

I. Objective: Student should be able to interchange the logic symbols for their word meanings.
Strategies: 2, 3
Examples of situations: After the introduction of the words "and," "or," "not," and "if then," their appropriate symbols are given ($\wedge, \vee, \sim, \rightarrow$). A list of compound sentences will be provided for students to change to symbol form and vice-versa.
Examples: John is tall and Art is short. $J \wedge A$
John is tall or Art is short. $J \vee A$
If John is tall, then Art is short. $J \rightarrow A$
This would continue until each student could complete at least 70 percent of the items.

II. Objectives: (1) Each student should be able to write a converse, an inverse, and a contrapositive when given a conditional.
(2) Find truth values for simple and compound mathematical statements.
Strategies: 2, 3, 4, 14
Situation: After students are familiar with $P \rightarrow Q$ statements, they should be able to change this into its converse $Q \rightarrow P$, its inverse $\sim P \rightarrow \sim Q$, and its contrapositive $\sim Q \rightarrow \sim P$. They will supply examples from their geometry course. By analogy they will reason the truth values of each.
Examples for reasoning truth values:

If $3 + 2 = 5$, then $6 = 4$
If $3 + 2 \neq 5$, then $6 = 4$
If $6 = 4$, then $3 + 2 = 5$
If $6 \neq 4$, then $3 + 2 = 5$
If $6 \neq 4$, then $3 + 2 \neq 5$

This would continue until all students are able to determine truth values for at least 70 percent of these typical examples. Truth tables may then be introduced for the interested students.

The next lesson plan is designed for high school English. The techniques can well be used at other levels, as the unit is developed to include the affective domain and the higher levels of thinking in the cognitive domain.

3. The Beginning of a Unit on Short Stories
Contributor: Peggy Stanton
Concepts: Appreciation of a short story can evolve from the study of the elements of the short story such as theme, plot, point of view, and tone. Reading and studying the short story can bring about the realization that literature may be relevant to life.
Objectives: (Informational)
1. to help students be able to discuss the major elements of a short story, such as theme, characterization, tone, etc.
2. to encourage students to do divergent thinking through brainstorming and other techniques
3. to help students to think critically, analytically, and creatively by teacher's questioning according to Bloom's taxonomy
4. to let students hear and see some music, art, and movies as part of the unit

Some possible teaching strategies taken from Dr. Dorothy Sisk's explanation of Frank Williams' Model, Numbers 2, 4, 5, 6, 8, 10, 12, 13, 19, 21, 23 - Basic Materials:

Boynton, Robert W. and Maynard Mack. Introduction to the Short Story. New York: Hayden Book Company, Inc., 1965.

McFarland, Phillip, et. al. Perceptions in Literature. Boston: Houghton Mifflin Company, 1972.

General plan of procedure for three or four of the short stories to be studied:

I. Have the class divide into several small groups, telling them that they are all part of a chain of command which is to construct, justify, and carry out an order for executing a man strongly suspected of aiding the enemy. They are to carry the order down the line from group to group until they have accomplished the task. As the class becomes involved in the exercise, there (hopefully) will be much debate about whether they have sufficient evidence, whether execution may be delayed, etc. Finally, the execution by hanging is dramatized by them.

Next, assign the short story "An Occurrence at Owl Creek Bridge" to be read for the following day.

II. The group is to see the film of "An Occurrence at Owl Creek Bridge." Then discuss the sounds and images in the movie. Next, discuss the advantages and disadvantages of each medium.

Discuss point of view and the shifts in point of view. Discuss characterizations, especially. On the board, list some of the analogies to their own lives--as they contribute these to the discussion.

Assignment to be handed in perhaps two or three days later: Imagine you have miraculously escaped death by drowning, accident, or disease. In a reflective essay, survey your primary values. If you had died, what would you most regret losing, no longer knowing or experiencing?

Assignment for the next day: Read "The Lottery" by Shirley Jackson.

III. Without any discussion beforehand (if that is possible for such a terrifying story!) have the students role-play this story. Let them volunteer to be a particular character. Then discuss such things as their feelings in that particular role, point of view, tone, theme, etc. Discuss especially how this story is contemporary. Try to bring in discussion of values without moralizing or preaching.

Assignment: Read "The Scarlet Ibis" by James Hurst.

IV. First, brainstorm as to the meaning of symbol and examples of symbols in daily life and other symbols also that are not so common or ordinary. Then discuss this short story in the obvious ways of characterization, etc., but concentrate on it in relation to symbolism.

Assignment: composition -- Tennessee Williams says in his play The Glass Menagerie that "being different is nothing to be ashamed of." However, all of us know people like Doodle who are misunderstood or mistreated because they are different. Write a personal essay in which you describe someone you know who is different and who receives different treatment for that reason.

V. (2 or 3 days) Discuss symbolism in the paintings: "The Adoration of the Lamb," "The Peacock King," "Fortitude and Temperance with Classical Representatives," "The Strayed Sheep," "Enchanted Domain Series," and "Soap Bubble Box." Along with discussing these paintings, play the record and then discuss Wagner's Lohengrin: "Prelude to Act I." Mention specific things for students to listen for. Concentrate especially on interpretation, analysis, and evaluation.

Near the end of the first day's discussion of symbolism, ask the students to bring magazine pictures to the next class, or pictures of paintings, music, or sketches of their own that are symbolic. During the second day's discussion, tie in and discuss their contributions. Then display these on a bulletin board.

The above plans have shown the general procedures that I plan to use with the short story unit. Probably fifteen to twenty stories will be studied.

Some other possible activities that I could use with this unit would include encounter groups. After the students have read all the stories, divide the class into small groups. Let each group have three or four of the short stories to consider. Let each group select one of their assigned stories to role-play (or pantomime) in front of the class. Let the class guess the story and then evaluate the group's interpretation of characterization and theme, especially. Or let each small group, with one out of three or four possible stories, create and transform a new situation perhaps more relevant to their lives. Let each group then present its story (or play) to the class for discussion and evaluation. After all presentations have been given, have the students evaluate the entire study through short papers and/or class discussion.

Other short stories that I probably will include in this unit are the following:

Aiken: "Silent Snow, Secret Snow"
Algren: "A Bottle of Milk for Mother"
Benet: "By the Waters of Babylon"
Dahl: "The Way Up to Heaven"
Doyle: "The Boscomb Valley Mystery"
Faulkner: "Two Soldiers"
Harrison: "Miss Hinch"
Kreisel: "The Broken Globe"
Malamud: "The First Seven Years"
O'Connor: "First Confession"
O. Henry: "A Retrieved Reformation"
Platero and Miller: "Chee's Daughter"
Poe: "The Cask of Amontillado"
Steele: "Footfalls"
Suckow: "A Start in Life"
Thurber: "The Catbird Seat"
Wells: "The Man Who Could Work Miracles"

This lesson plan is written for use in junior high social science classes or in language arts/social studies block.

4. Discovery and Exploration Unit

Contributor: Mercedes Newsome

Overview: This social science unit, "Discovery and Exploration," is a multi-disciplinary unit. The unit has been written with the idea of helping the student to learn and grow by using the thinking process. In the curriculum the following operations have been stressed: observing, comparing, summarizing, classifying, interpreting, problem solving, criticizing, imagining, decision making, looking for assumptions, working on larger projects and hypothesizing.

A number of textbooks, films, filmstrips, pictures, resource persons and a field trip will also be used to help enrich the unit.

Along with integrating North Carolina history in the unit, a number of language arts skills have been stressed. The use of the language arts skills does not mean that the class should be free from working on certain necessary skills. Special work will be given in vocabulary building using the thematic approach and in grammar, using the language pattern method. A special enriched literature book is required by the county and will be used in the class. Speed reading exercises will be given three times a week.

References:

Banks, Chrono-Topical American History
Cauthey, Land of the Free
Chopin, Quest for Liberty
Todd, Rise of the American Nation
*Eibling, Foundation of Freedom United States History 1877
*Lefler, North Carolina History, Geography, Government

(*textbooks for New Hanover County)

Students may have others at home, or they may be in the school library.

Unit I. Discovery and Exploration Time: 3 weeks

Concepts:

1. Discovery grows out of unrest, dissatisfaction with the status quo, and greed.
2. Discovery requires of its agents courage, persistence, and inquisitiveness.
3. Discovery and exploration are not limited to geographical frontiers.
4. Discovery can bring about a sharing among individuals and nations.
5. Exploration could be the invasion of occupied territory.
6. Opportunities for discovery are abundant today.

Part I.- Background

Objectives: Students should be able to:

1. recognize and list the changes in culture during the Middle Ages and Renaissance.
2. list the characteristics of each trend that stimulated discovery and exploration of the New World and the emergence of modern Europe.
3. list the changes in patterns in the following disciplines from the Middle Ages to the Renaissance: music, art, literature, science.
4. identify some personalities of the Renaissance and their contributions.
5. compare the usefulness of scientific and technological knowledge in the 20th century with the usefulness of scientific and technological knowledge in the 15th century.
6. prove that geography has a definite influence on commerce.
7. show that economic greed led to the discovery of a new route to the Orient.
8. prove that the rise of modern Europe and the discovery of the New World were influenced by the same trends.

Motivation:

1. Send all of the students out of the classroom.
2. While the students are out of the room, place a penny by each desk. (Try to get new pennies.)

3. Before the students return to the room, inform them that they will land on another planet and the only thing left of that civilization is the one shiny object by their desk. What can you tell about the civilization from the object? List on the board.
4. Of all the discoveries you can think of, which one do you think we could do without? Why? What would you use in its place?
5. What would your world be like without radio, TV, etc.?
6. Teacher: "Let's take a trip back in time and experience; what was life like without some of our present inventions?"

SUBJECT MATTER	STRATEGIES
Feudalism	Filmstrip "Feudalism" - questions after film: What did you like most about living in that culture? What did you like least about living in that culture? Could you identify with any of the people in that culture? Do you think the people were happy? Are you happy with all the material things you have?
Renaissance	Students will be assigned 3 books (history) to read brief accounts of this period. Books and filmstrips are in the "Inquiry Section" of the room. Library passes are available. Viewing filmstrips on individual basis. Make a chart showing changes in art, music, science, and religion. Example:

	Middle Ages	Renaissance
Music:	Unison singing in choirs	polyphonic sounds in choirs

What contribution did the following people make?

1. Copernicus
2. Galileo
3. Bacon
4. Martin Luther
5. John Wycliffe
6. John Huss
7. Shakespeare
8. Michaelangelo
9. Others that you would like to present to the class

What do you think was the greatest scientific invention? (Support) Draw a picture of your invention or bring a picture to class with you. Do you feel that religion would serve a better purpose if we all worshiped at the same church? Why do you feel that many religious denominations are better for society? What do you admire most about Martin Luther? Do you feel that Martin Luther had a right to break away from the Catholic Church? Find a hymn that he wrote and tell us how the hymn reflects his personality.
Resource people: art and music teachers in the school
Topic: Renaissance art and music

Correlation of Language and Literature	Oral discussion: (1) What changes came about at this period in language? (2) How did the people communicate before? (3) What effect did changes in language have on exploration and discovery? (4) Whom do you think

SUBJECT MATTER	STRATEGIES
Correlation of Language and Literature (continued)	was the greatest literary figure during this period? What standards did you use for selecting him? Film - William Shakespeare, post-questions: (1) After seeing the film, did Shakespeare possess any characteristics that made you think he was outstanding? (2) To what extent does personality determine an individual's success or failure? "Let's read one of his works, Taming of the Shrew." (A guide sheet will be given which includes major characters, type of work, and guide questions. Students will be told that the plot depends on situations rather than character.) Discussion: (1) What was the plot? (2) Are the characters like any real people that you know? (3) Do the characters in the story seem to develop any change as the story progresses, or do they all remain about the same from beginning to end? Support your conclusion by specific reference. (4) Which character fell into one or more of these categories: well-adjusted to life, aimless and drifting, scheming, evil, selfish, honest, idealistic? (5) Did any of the characters have abilities or attitudes that you wish you had? (Support.) (6) Pretend that you are a psychiatrist and analyze any one of the major characters. Included -- impact of past experience upon present behavior, the success or failure in adjustment to the problem, ability or lack of ability to change, the major drives that influence the future (7) What do you suppose was the author's main reason for writing the story? (8) How well do you think the author solved the conflict in the story? (9) Did you feel that you were an eyewitness? (10) What do you think about the title of this story? How well did it suit the story? (11) Design a book jacket to illustrate the main idea. (12) Find a proverb or wise saying that would either contradict or confirm the story's outcome. (13) How would Shakespeare treat the story if he were living in the 20th century?
Crusades	Filmstrips or film: Crusaders -- Discussion: (1) Who were the crusaders? (2) How did the crusaders start men thinking new thoughts and dreaming new dreams? (3) What course do you think history might have taken if there had been no Holy Wars? (4) What influence did the Crusaders have on the Commercial Revolution?
Commercial Revolution	Define: monopoly, mercantilism -- (silent reading on the Crusades) You may select any of the books in the "inquiry section" or use the library. You must read three sources on this topic. (1) Show how the

SUBJECT MATTER	STRATEGIES
Commercial Revolution (continued)	Italian merchants controlled the economic system during this period. (2) Map skill: Locate Genoa, Persia, Venice, Constantinople, Bagdad, India, Damascus, Antioch, Alexandria. Do any of these places exist today? If not, what new places have replaced them? Make a before and after map. (3) How did the Commercial Revolution encourage exploration and discovery? (4) If you had been a merchant from Spain or Portugal, how would you have broken the monopoly of the Venetians and Genoans on the east-west trade?
Test	(I expect 80% accuracy.) Show each of the following trends aided in discovery and exploration: Decline of Feudalism, Renaissance Reformation, Rise of Nation State, Crusaders, Commercial Revolution, Scientific and Technological Knowledge.--(60%) Which one had least to do with exploration and discovery? Which one had most to do with exploration and discovery? (Support.)--(10%) Explain how a Commercial Revolution promotes exploration and discovery.--(10%) Which personality during the Renaissance did more to promote the new view of life and the world which was individualistic, experimental, enterprising and confident?--(20%)

Part II. - The Americans Before Columbus Came

Objectives: Students should be able to:

1. identify the role of the archeologist in helping to determine historical facts.
2. list reasons why people first came to America.
3. identify the environmental factors that often determine the stability and complexity of the culture of the pre-Columbus Indians.
4. compare the major differences in culture in the Early Mountains and Plateau, Early Big-Game Hunting, Early Eastern Woodland and Valley Indians.
5. locate and name the major culture groups of North America on an outline map.
6. locate and name the three great Indian civilizations.
7. list the tribes of Indians located in North Carolina.
8. compare and contrast the political, the economic, and religious beliefs of three great Indian civilizations.
9. prove that the geography of North Carolina influenced the economic, political, and religious life of the Indians.
10. compare the culture of the Indian tribes in North Carolina.
11. prove that the Indians were or were not wild, uncouth people.
12. develop useful hobbies.

Motivation:

1. Use a physical map to show the known parts of the world during this period.

(Motivation: continued)

2. Cover the "known world." Expose only the Western Hemisphere. Why could not this be called the known world?
3. Was there any type of culture on this hemisphere?
4. What is culture?
5. How do we know that culture existed here?

SUBJECT MATTER	STRATEGIES
"The First American," Chapter I in Textbook and Two Other Authors on the Same Subject	Define: artifacts, geologists, technology, geography, archaeological, archaeologists, radiocarbon -- field trip to county museum to view Indian artifacts -- Answer all the questions at the end of the chapter. (You may work in groups.) Class discussion: (1) How can learning about other cultures help you understand yourself and others? (2) Is it bad that people develop different cultures? (3) Do you think that all environmental conditions should be the same in order that all cultures could be the same?
Test	Objective test that goes along with the text--(70%) Part II: Write an article for a magazine on the importance of understanding culture of people before you prejudge.--(30%)
Indian Societies in Pre-Columbian America	Film - Before the White Man Came (No questions will follow. If students have questions, they will be answered.) Read Chapter II and answer all questions at the end of the chapter. Discussion: (1) Which of these Indian societies would you consider bad? Why? (2) Would you say that the Indian tribes were uncivilized? Prove. (3) Do economic factors control all of human's existence?
Test	Class activity -- Divide the class into groups and let them create an Indian museum. Make an investigation of different points of views of the Indians. You may use TV programs, comic books, others. Are these views based on opinions or facts? How could they bring about harm? From "North Carolina's Indians," Chapter 4, North Carolina History, Geography, Government, Lefler: (1) Name the Indian tribes that lived in North Carolina. (2) Compare the Indian tribes in North Carolina and show how geography caused a difference in the tribes. (3) Are there any Indian towns near you? Do we have any streets, buildings, rivers, etc., in our city or county named for Indians? (4) How did the Indians help in the development of the colony of North Carolina?

Part III. - Discovery and Rediscovery of the New World

Objectives: Students should be able to:

1. relate present exploration with exploration in the 15th century.
2. list the reasons that helped to promote exploration.
3. identify early explorers and their contributions.
4. locate the routes of early explorers.
5. recognize and appreciate accomplishments of others.

Motivation:

1. What great explorations have been made recently by Russians and Americans?
2. Did the Russians contribute to our space programs?
   Film: Our First Space Flight
3. Compare Columbus' exploration with our first space program. Include: finance, articles taken, time, instruments, etc.
4. What were the major difficulties experienced by the astronauts? Columbus?
5. Which exploration do you think encountered more difficulties?
   (Text related readings on discovery and rediscovery)
   (Students will view filmstrips individually.)

Complete chart:

First Seven Astronauts

Astronauts	Date	Country	Discovery or Reason for Going

Name	Date	Nationality	Sponsor	Discovery Conquest
Prince Henry the Navigator	1420 1460	Portuguese	Portugal	Sailed halfway down the west coast of Africa

Oral discussion:

1. What would have happened if the Vikings' exploration had had a positive reaction from the rest of the world?
2. Why was it necessary for the kings to be patrons of the merchants?

Test:

Go out in your community and make a discovery. You may do one of the following things:

1. Write a paragraph on how you felt after your discovery. Will your discovery change your behavior in any way?
2. Tape sounds to express your feelings and results.
3. Draw pictures to express your feelings and results.
4. Make cartoons to express your feelings and results.
5. Find pictures in magazines to express your feelings and results.
6. Prepare a pantomime skit on your feelings and results.

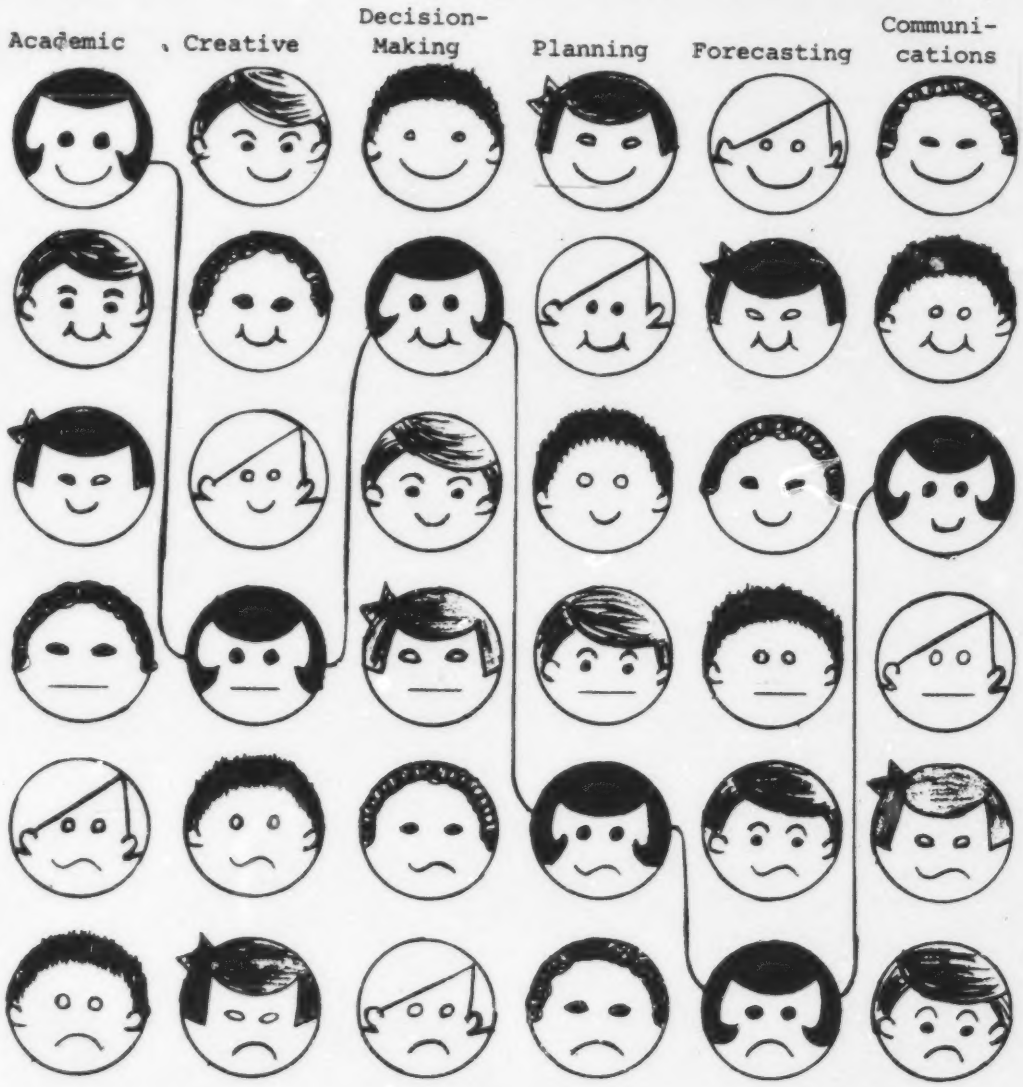
Many very good lesson plans were contributed by the Institute teachers; however, due to limited space, only a few are included. These samples are from different disciplines and different levels. Individual handouts of other lesson plans are available from the Gifted and Talented Section office.

Summary

Much of the material shows an interweaving of the many theories and techniques and the previous experience of the Institute participants. It is impossible and unnecessary to draw a sharp line between the examples of theories and their application. By now, hopefully, the teachers have analyzed, synthesized, and evaluated all the information and have internalized it so that it is completely characteristic of them. The Governor's School Teacher Training Institute hopes that every teacher will find this publication of practical and inspirational help.

APPENDIX

TAYLOR'S TOTEM POLES



MULTIPLE TALENT TOTEM POLES

This illustration represents research on talent discovery by Dr. Calvin W. Taylor, professor of psychology, University of Utah, Salt Lake City.

FOOTNOTES

[1]Benjamin S. Bloom, Editor, et. al., Taxonomy of Educational Objectives: Handbook I: Cognitive Domain, David McKay Company, Inc., New York, 1956.

[2]David R. Krathwohl, et. al., Taxonomy of Educational Objectives: Handbook II: Affective Domain, David McKay Company, Inc., New York, 1964.

[3]H. Michael Lewis, Open Windows Into the Future, The Governor's School of North Carolina, 1969.

[4]Richard A. Lacey, Seeing with Feeling: Film in the Classroom, W. B. Saunders Company, Philadelphia, 1972.

[5]Frank E. Williams, Classroom Ideas for Encouraging Thinking and Feeling, D. O. K. Publishers, Inc., Buffalo, New York, 1970.

[6]Ibid.

ANNOTATED BIBLIOGRAPHY

The books listed in this bibliography are recommended by the Institute participants. They have used the books in their own teaching and wanted to share with other teachers information about the books.

Barnes, Wesley. The Philosophy and Literature of Existentialism. Woodbury, New York: Barron's Educational Series, Inc., 1969. ($2.50)

This book is a very helpful introduction to the understanding of existentialism and some of the most important authors involved.

Behnke, John A. Challenging Biological Problems. New York: Oxford University Press, 1972. ($10.95)

It is a very scientific account of today's seventeen most crucial biological problems as they are analyzed by specialists who take the approach, "What would happen if . . . ?" This is a great book for a student engaged in scientific research.

Blackmur, R. P. Eleven Essays in the Modern Novel. Boston: Harcourt, Brace and World, Inc., 1964. ($2.95)

This is an excellent book for criticism on such novels as Ulysses, Madame Bovary, and Crime and Punishment.

Boynton, Robert W. and Maynard Mack. Introduction to the Short Story. New York: Hayden Book Company, Inc., 1965.

This book gives excellent information about analyzing tone, plot, theme, point of view of the short story. Also, it is grouped by types of subject matter such as terror, crime, and fantasy.

Brandel, Max. The Mad Book of Word Power. New York: Warner Paperback Library, Warner Books, Inc., 315 Park Avenue South, 1973. ($.75)

The book is a good source for "words that do what they say." It also brings to mind some new ways to study vocabulary.

Carlsen, G. Robert. Books and the Teenage Reader. Bantam Books, 1971. ($.95)

The book discusses various categories of books -- adolescent novels, popular adult books, classics, poetry, etc. -- and contains a bibliography for each type.

Cartwright, Frederick F. Disease and History. New York: Thomas Y. Crowell Company, 1972. ($7.95)

It is a very interesting book comparing the history of man and the plagues that changed the course of human events. A marvelous reference for a humanities course.

Christian, Robert R. Logic and Sets. Waltham, Massachusetts: Bladesdell Publishing Company (a division of Ginn and Company).

It is an excellent book for independent study. The book is readable. It opens up many areas concerning foundations of mathematics for further exploration by the student.

Daigon, Arthur and Ronald T. LaConte, Editors. Dig U.S.A. New York: Bantam Books, Inc., School and College Division, 666 Fifth Avenue, 1970. (also has accompanying teacher's manual)

"A book about the many faces of this generation" - This book contains graffiti, poetry, interviews, comic strips, graphs, tables, editorials, dialogues, songs, and a variety of other writings and pictures on youth. It includes an excellent communication exercise for teenagers and a project list for individual and group projects. (high school level)

Drakeford, John W. The Great Sex Swindle. Nashville, Tennessee: Broadman Press, 1966. Library Congress Number 66-14742. ($2.75)

This is a provocative book on sex morals and their effect on our society. "A sexually permissive society has a price to pay. Society and its members are part of an indivisible whole." It is a very realistic view of our world and the logic of premarital chastity and is "a must for every person to read."

Dubos, Rene. So Human An Animal. New York: Charles Scribner's Sons, 1968. Library Congress Number 68-27794. ($1.45)

It is an excellent comparison of man and his environment down through the ages. Dubos relates that just as the cat and dog still retain fundamental characteristics of their wild ancestors, so does modern man as he exhibits many traits that have survived from his distant past. The book is also a 1969 Pulitzer Prize winner.

Esslin, Martin. The Theatre of the Absurd. Garden City, New York: Anchor Books, 1969. ($2.50)

This is a wonderful book of reference for such authors as Beckett, Adamor, Jonesco, and Genet.

Everett, Walter K. Faulkner's Art and Characters. Woodbury, New York: Barron's Educational Series, Inc., 1969. ($2.50)

The book gives very valuable assessments and evaluations of William Faulkner and his works.

Eves, and Newsom. An Introduction to the Foundations and Fundamental Concepts of Mathematics. Holt, Rinehart and Winston.

This is an excellent book for expanding and maturing the mathematical mind. It has been used as a textbook.

Farmer, Robert A. 1000 Ideas for English Term Papers. New York: Arc Books, Inc., 1967. (approximately $1.00 or $1.50)

There are topics given from Chaucer through modern realism. Some explanation is given about each topic also. The topics and subjects are intriguing.

Fromm, Erich. The Art of Loving. New York: Bantam Books, Inc., 1963. ($.75)

A teacher -- and a human being -- needs the experience of reading and knowing this book. It gives wise counsel on such things as how to overcome the fears of love, how to use love to release hidden potentialities, and how to make love become the most exhilarating and exciting experience of life. "If you do not know this book, you owe it to yourself to read it."

Gerber, John C. Twentieth Century Interpretations of the Scarlet Letter. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968. ($1.25)

This book contains several essays by eminent critics. It is a very valuable resource for the teacher and student. (Note: This is just one book of many in the series of Twentieth Century Interpretations. They are all well worth the cost.)

Goodall, Jane Van Lawick. In the Shadow of Man. Boston: Houghton-Mifflin Company, 1971. ($10.00)

The photography in the book is excellent as part of Ms. Goodall's story is told in pictures taken by her husband, Hugo Van Lawick. It is a very exciting adventure in the wilds of Tanzania, Africa, as she tells of her studies of the wild chimpanzees. The book is certainly "one of the most enthralling stories of animal behavior ever written."

Gross, Seymour L., Editor. A Scarlet Letter Handbook. Belmont, California: Wadsworth Publishing Company, Inc., 1960. (about $2.00 or $3.00)

This is an excellent book of criticisms. (Note: There are a number of other books in this series, including Charles A. Allen and George Stephen's Satire: Theory and Practice.)

Hornstein, Lillian, et. al. (Editor). The Reader's Comparison to World Literature. New York: Menton Books, 1956. ($1.25)

This is an excellent, almost indispensable book giving information about literary terms, literary periods, authors, etc. It is like a very, very concise set of encyclopedias on literature.

Kline, Morris. Mathematics in Western Culture. Oxford University Press.

Use this book to relate mathematics to other disciplines.

Kott, Jan. Shakespeare, Our Contemporary. New York: Anchor Books, 1966. (probably about $3.00)

The book is very good in discussing the relevance of Shakespeare's plays to today.

Leopold, Aldo. A Sand County Almanac and Sketches Here and There. New York: Oxford University Press, 1949-1968. ($1.95)

This is one of the best-written "diary-short story type" of books published in the past decade. Leopold's remembrances of the better things of life like winds and sunsets and wild things are expressed so vividly in his view of land and people. He states, "That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics. That land yields a cultural harvest is a fact long known, but lately often forgotten." The essays of this book attempt to weld these three concepts.

Littell, McDougal. The Language of Man. Books 1, 2, and 3. New on the supplementary list.

These incorporate many ideas of the Governor's School -- perception exercises, creativity, semantics, media. These are in a series of six. "I have only seen the first three. They are excellent."

May, W. Loys. You Can Learn English Grammar. Carolina Audio and Visual Aids, P. O. Box 18206, Raleigh, North Carolina 27609.

"This is the best grammar outline I have worked with."

National Council of Teachers of Mathematics. Enrichment Mathematics for High School. (The 28th Yearbook) Headquarters in Reston, Virginia.

Many topics not covered in any high school curriculum are introduced. Each topic is independent of the others. A bibliography of mathematics for the gifted is included.

Pilon, A. Barbara. Concrete Is Not Always Hard. Xerox Educational Publications, 1972. ($.95)

It is a most helpful book for teaching concrete poetry -- contains poems for a variety of ability levels and grade levels.

Magazines and Miscellaneous

American Education Publications. Education Center, Columbus, Ohio 43216.

AEP publishes many books for $.40 a copy. There are science units, social studies units, and English units. There is also a set of books for K-6.

Science units include such subjects as drugs, ecology, space, genetics, weather, sea and many other units.

Social studies units include units on values and decisions, Black Experience, area studies, elections, American woman, penal system, media, and a public issue set of units.

English books include language, composition, poetry, imagination, dramatics, creativity, and perception.

AEP will send catalogs for each category upon request. If the books in science and social studies are as helpful as the ones in English, they will be well worth the money.

Gazette PTST, (Prime Time School Television). 100 North LaSalle Street 1208, Chicago, Illinois 60602.

This is a free publication that gives information on upcoming programs on television of educational interest. This year it will begin to also publish project suggestions and alternative teaching plans. In September/October and in February/March, teacher's manuals called B. A. C. H. (BIANNUAL CREATIVE HANDBOOK) will be published. These will include student art work, papers submitted by teachers on use of media, papers and assignments by students related to PTST programs, and teacher plans and suggestions on alternative teaching methods.

Media and Methods. "It's All in the Game." October, 1972, p. 68.

Simulation games are listed -- probably good for current affairs, civics, etc.

The Literary Heritage Series in the MacMillan Paperback Series. New York: MacMillan Company. ($2.00 or $3.00 each)

Includes books with thought-provoking questions and some good evaluations of authors. Some books included in the series are most of Shakespeare's plays, Modern English Drama, The Early Years of American Literature, and The Changing Years of American Literature.

Games to use in English classes: PROBE, SPILL & SPELL, ANAGRAMS, SCRABBLE, WATCHWORD, SCRIBBAGE, CONCENTRATION (Use the rolls to figure out sayings, etc., and have the students create their own.) "This is great fun."